ICONES PLANTARUM.

VOL. III. NEW SERIES,

OR VOL. VII. OF THE ENTIRE WORK.

NOW PUBLISHING

THE

LONDON JOURNAL OF BOTANY.

BY

SIR W. J. HOOKER, K.H., L.L.D., F.R.A., & L.S.

VICE-PRESIDENT OF THE LINNÆAN SOCIETY, AND DIRECTOR OF THE ROYAL BOTANICAL GARDENS OF KEW.

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ON THE BOTANY

OF

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CONDUCTED BY

CAPTAIN JAMES CLARK ROSS, R.N. F.R.S. &c. &c. &c.

IN HER MAJESTY'S DISCOVERY SHIPS

EREBUS AND TERROR;

WITH OBSERVATIONS ON

THE TUSSAC GRASS

OF THE FALKLAND ISLANDS.

BY

SIR W. J. HOOKER, K.H. L.L.D. F.R.A. & L.S.

DIRECTOR OF THE ROYAL BOTANIC GARDENS OF KEW.

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1844-48
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ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

By SIR WILLIAM JACKSON HOOKER, K.H.,

L.L.D., F.R.A., AND L.S.
VICE-PRESIDENT OF THE LINNÆAN SOCIETY,
MEMBER OF THE IMP. ACAD. NAT. CUR., ETC., ETC., ETC.
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AND
DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

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INDEX

TO THE

PLANTS CONTAINED IN VOL. III., (NEW SERIES),

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ARRANGED ACCORDING TO THEIR NATURAL ORDERS.

TAB.

RANUNCULACEÆ.

Ranunculus stenopetalus, *Hook.* . 677
——— macropus, *Hook. fil.* 634
Cabomba Piauhyensis, *Gardn.* . 641
——— Caroliniana, *A. Gray*, . 642
Anemone Jamesoni, *Hook.* . . 670

CRUCIFERÆ.

Lepidium rotundum, *DC.* . . 609
Stenopetalum? procumbens, *Hook.* 610
——— robustum, *Endl.* . 620
——— lineare, *Br.* . . 618
——— draboides, *Hook.* . 617
Leptenema Lindeni, *Hook.* . . 692
Cardamine corymbosa, *Hook. fil.* 686

BERBERIDEÆ.

Berberis Darwinii, *Hook.* . . 672

CAPPARIDEÆ.

Tovaria pendula, *R. & P.* . . 664

CARYOPHYLLEÆ.

Stellaria decipiens, *Hook. fil.* . 680
Schiedea Nuttallii, *Hook.* . 649-50

PITTOSPOREÆ.

Pittosporum rhombifolium, *A. Cunn.* 621

TILIACEÆ.

Sloanea Jamaicensis, *Hook.* . 693-4
——— fruit, . . 695-6

ELÆOCARPEÆ.

Friesia racemosa, *A. Cunn.* . 601
Elæocarpus Hinau, *A. Cunn.* . 602

TAB.

OXALIDEÆ.

Oxalis lotoides, *H. B. K.* . . 661

TROPÆOLEÆ.

Tropæolum tuberosum, *R. & P.* 653

MELIACEÆ.

Hartighsea spectabilis, *Adr. Juss.* 615-16

RUTACEÆ.

Pachystigma pteleoides, *Hook.* 698-9
Melicope ternata, *Forst.* . . 603

LEGUMINOSÆ.

Oxylobium batillum, *Hook.* . 612
Vigna hirta, *Hook.* . . . 637

MYRTACEÆ.

Eucalyptus maculata, *Hook.* . 619
——— spathulata, *Hook.* . 611
Myrtus pedunculata, *Hook. fil.* . 629

LOASEÆ.

Loasa rupestris, *Gardn.* . . 663

ONAGRARIEÆ.

Epilobium confertifolium, *Hook. fil.* 685

CRASSULACEÆ.

Sedum Wallichianum, *Hook.* . 604

UMBELLIFERÆ.

Aciphylla squarrosa, *Forst.* . 607-8

TAB.

LORANTHACEÆ.

Loranthus albiflorus, *Hook.* . 683
——— (Dendrophthoe) Colensoi, *Hook. fil.* . . . 633

CAMPANULACEÆ.

Campanula Vidalii, *Watson,* . 684

GESNERIACEÆ.

Trichantha major, *Hook.* . . 667
——— minor, *Hook.* . . 666
Conradia calycosa, *Hook.* . 689-90

GENTIANEÆ.

Gentiana Grisebachii, *Hook. fil.* 636
Leianthus umbellatus, *Griseb.* 687-8
Gentiana bellidifolia, *Hook. fil.* . 635

ASCLEPIADEÆ.

Scytanthus Currori, *Hook.* . 605-6
——— Gordoni, *Hook.* . 625

BORAGINEÆ.

Euploca convolvulacea, *Nutt.* . 651

SCROPHULARINÆ.

Veronica diffusa, *Hook. fil.* . . 645
——— nivea, *Hook. fil.* . . 640

OROBANCHEÆ?

Pholisma arenarium, *Nutt.* . 626

EUPHORBIACEÆ.

Euphorbia alata, *Hook.* . . 600

CUPULIFERÆ.

Fagus fusca, *Hook. fil.* . . 630-1
——— Cliffortioides, *Hook. fil.* . 673
——— Solandri, *Hook. fil.* . . 639
——— Menziesii, *Hook. fil.* . 652

CONIFERÆ.

Cryptomeria Japonica, *Don.* . 668
Podocarpus Purdieana, *Hook.* . 624

TAB.

RAFFLESIACEÆ.

Apodanthes Calliandræ, *Gardn.* . 644
——— Casearіæ, A. Berterii, A. Calliandræ, et A. Blanchetii, *Poit.* 655

ORCHIDEÆ.

Cypripedium caudatum, *Lindl.* 658-9

DIOSCOREÆ.

Dioscorea pusilla, *Hook.* . . 678

SMILACINEÆ.

Callixene parviflora, *Hook. fil.* . 632
——— polyphylla, *Hook.* . 674

MELANTHACEÆ.

Tofieldia sessiliflora, *Hook.* . 691

COMMELINEÆ.

Tradescantia hirsuta, *H. B. K.* . 665
——— gracilis, *H. B. K.* . 654

BURMANNIACEÆ.

Apteria setacea, *Nutt.* . . 660

FILICES.

Hemitelia? Parkeri, *Hook.* . 643
——— Hostmanni, *Hook.* . 646
——— alternaus, *Hook.* . 622
——— Guianensis, *Hook.* . 648
——— Imrayana, *Hook.* . 669
Cyathea Walkeræ, *Hook.* . . 647
——— Beyrichiana, *Presl,* . 623
——— integra, *J. Sm.* . . 638
Alsophila crinita, *Hook.* . . 671
Lomaria Colensoi, *Hook. fil.* . 627-8
Acrostichum proliferum, *Hook.* 681-2
——— Tambillense, *Hook.* . 656
——— Lloense, *Hook.* . 657
Hypoderris Brownii, *J. Sm.* . 675-76

ALGÆ.

Thamnocarpus Gunnianus, *Harv.* 662
Rhodoplexia Preissii, *Harv.* . 613
Sphacelaria hordeacea, *Harv.* . 614
Martensia elegans, *Hering,* . 697
Cryptonemia? Forbesii, *Harv.* . 679

INDEX

TO THE

PLANTS CONTAINED IN VOL. III., (NEW SERIES),

(OR VOL. VII. OF THE ENTIRE WORK;)

ALPHABETICALLY ARRANGED.

	TAB.		TAB.
Aciphylla squarrosa, *Forst.* .	607·8	Eucalyptus maculata, *Hook.* .	619
Acrostichum Lloense, *Hook.* .	657	Euphorbia alata, *Hook.* . .	700
——— proliferum, *Hook.*	681-2	Euploca convolvulacea, *Nutt.* .	651
——— Tambillense, *Hook.* .	656	Fagus Cliffortioides, *Hook. fil.* .	673
Alsophila crinita, *Hook,* . .	671	—— fusca, *Hook. fil.* .	630-1
Anemone Jamesoni, *Hook.* . .	670	—— Menziesii, *Hook. fil.* . .	652
Apodanthes Calliandræ, *Gardn.* .	644	—— Solandri, *Hook. fil.* . .	639
——— Caseariæ, A. Berterii, A. Calliandræ, and A. Blanchetii, *Poit.*	655	Friesia racemosa, *A. Cunn.* .	601
		Gentiana bellidifolia, *Hook. fil.* .	635
		——— Grisebachii, *Hook. fil.* .	636
Apteria setacea, *Nutt.* . .	660	Hartighsea spectabilis, *Ad. Juss.*	615-16
Berberis Darwinii, *Hook.* . .	672	Hemitelia? alternaus, *Hook.* .	622
Cabomba Caroliniana, *A. Gray.* .	642	——— Guianensis, *Hook.* .	648
——— Piauhyensis, *Gardn.* .	641	——— Hostmanni, *Hook.* .	646
Callixene parviflora, *Hook. fil.* .	632	——— Imrayana, *Hook.* .	669
——— polyphylla, *Hook.* .	674	——— Parkeri, *Hook.* . .	643
Campanula Vidalii, *Watson* .	684	Hypoderris Brownii, *J. Sm.*	675-6
Cardamine corymbosa, *Hook. fil.*	686	Leianthus umbellatus, *Griseb.*	687-8
Conradia calycosa, *Hook.* .	689-90	Lepidium rotundum, *De Cand.* .	609
Cryptomeria Japonica, *Don,* .	668	Leptonema Lindeni, *Hook.* .	692
Cryptonemia? Forbesii, *Harv.* .	679	Loasa rupestris, *Gardn.* . .	663
Cyathea Beyrichiana, *Presl.* .	623	Lomaria Colensoi, *Hook. fil.*	627-8
——— integra, *J. Sm.* . .	638	Loranthus albiflorus, *Hook.* .	683
——— Walkeræ, *Hook.* . .	647	——— (Dendrophthoe) Colensoi, *Hook. fil.*	633
Cypripedium caudatum, *Lindl.*	658-9		
Dioscorea pusilla, *Hook.* . .	678	Martensia elegans, *Hering,* .	697
Elæocarpus Hinau, *A. Cunn.* .	602	Melicope ternata, *Forst.* . .	603
Epilobium confertifolium, *Hook. fil.*	685	Myrtus pedunculata, *Hook. fil.* .	629

	TAB.
Oxalis lotoides, *H. B. K.*	661
Oxylobium batillum, *Hook.*	612
Pachystigma ptelcoides, *Hook.*	698-9
Pholisma arenarium, *Nutt.*	626
Pittosporum rhombifolium, *A. Cunn.*	621
Podocarpus Purdieana, *Hook.*	624
Ranunculus macropus, *Hook. fil*	634
—— stenopetalus, *Hook.*	677
Rhodoplexia Preissii, *Harv.*	613
Schiedea Nuttallii, *Hook.*	649-50
Scytanthus Currori, *Hook.*	605-6
—— Gordoni, *Hook.*	625
Sedum Wallichianum, *Hook.*	604
Sloanea Jamaicensis, *Hook.*	693—6
Sphacelaria hordeacea, *Harv.*	614
Stellaria decipiens, *Hook. fil.*	680
Stenopetalum draboides, *Hook.*	617
—— lineare, *Br.*	618
—— procumbens, *Hook.*	610
—— robustum, *Endl.*	620
Thamnocarpus Gunnianus, *Hook.*	662
Toficldia sessiliflora, *Hook.*	691
Tovaria pendula, *R. & P.*	664
Tradescantia gracilis, *H. B. K.*	654
—— hirsuta, *H. B. K.*	665
Trichantha major, *Hook.*	667
—— minor, *Hook.*	666
Tropæolum tuberosum, *R. & P.*	653
Veronica diffusa, *Hook. fil.*	645
—— nivea, *Hook. fil.*	640
Vigna hirta, *Hook.*	637

TAB. DCI.

Friesia racemosa. *A. Cunn.*

Dioica, foliis cordato-ovatis acuminatis longe petiolatis serratis, racemis compositis axillaribus, ramulis foliisque junioribus pubescenti-hirtis, stigmate 4-lobo.

Friesia racemosa. *A. Cunn. in Ann. Nat. Hist. v.* 4, *p.* 24.

Dicera? serrata. *Forst. Prodr. n.* 227. *De Cand. Prodr.* 1, *p.* 520. *A. Rich. Fl. Nov. Zel. p.* 304.

Elæocarpus Dicera. *Vahl, Symb.* 3, *p.* 67.

Hab. New Zealand, shady forests, Northern Island. *Sir J. Banks, A. Cunningham, Colenso, Edgerley, Bidwill, Sinclair, Dr. Hooker.* Middle Island, *G. Forster.*

The dicœcious nature of this plant does not seem to be noticed by any author: yet such is the fact. And at the time the accompanying figure was made, I did not possess the female flowers, only the male flowers and fruit. They have, however, since been brought home by Dr. Hooker; and exhibit small, barren stamens, an ovate germen, seated upon an annular disk with four glands, a tapering, deciduous style, and a four-cleft, spreading stigma. In this dicœcious character, in the four-cleft stigma and in the paniculated flowers, the plant differs from the original *Friesia* of De Candolle; but it agrees in all other essential particulars. It forms a shrub or small tree, 12-15 feet high, and is called *Mako-mako* by the natives.

Fig. 1. Male flower. *f.* 2. The same, more expanded. *f.* 3. Perfect stamen. *f.* 4. Portion of a fructiferous panicle; *nat. size.* *f.* 5. Fruit; a *bacca sicca.* *f.* 6. The same, cut open transversely. *f.* 7. The same, laid open vertically. *f.* 8. A seed laid open. *f.* 9. Embryo:—*magnified.*

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TAB. DCII.

Elæocarpus Hinau. *A. Cunn.*

Foliis alternis petiolatis oblongis basi attenuatis coriaceis superne serratis subtus adpresso-sericeis nervis prominentibus, nervorum in axillis sæpe foveolatis superne bullatis, racemis axillaribus simplicibus, petalis trilobis, antheris apice inæqualiter bilabiatis, ovario biloculari, loculis biovulatis, drupa ovali monopyrena.

Elæocarpus Hinau. *A. Cunn. in Ann. Nat. Hist. v.* 4, *p.* 23.
Elæocarpus dentatus. *Vahl. Symb.* 3, *p.* 67.
Dicera dentata. *Forst. Prodr. n.* 226, *De Cand. Prodr.* 1, *p.* 520. *A. Rich. Fl. Nov. Zel. p.* 303.
Hab. New Zealand, Northern Island, *Sir J. Banks, A. Cunningham, Colenso, Edgerly, Dr. Hooker.*—"*Hinau*" of the natives.

Of the genus *Dicera* of Forster, founded upon the present plant, but to which Forster added doubtfully, the *Dicera? serrata*, the *D. dentata* is by Vahl correctly referred to *Elæocarpus*, and the *D. serrata* by De Candolle to *Friesia* (See Tab. dci.); so that the only plant now remaining in *Dicera* is the very dubious *Craspedium tectorum*, of Loureiro. Of the plant here figured, Mr. Cunningham has given a very accurate description; but he describes the ovary as 5-celled, which I find to be 2-celled. The solitary fruit I possess is a drupe with one perfect seed. "The wood of the *Hinau* is remarkable for its whiteness; but it is almost useless, on account of the way in which it splits when exposed either to wet or warmth. Its chief use is that it makes an excellent dye, either a light brown, puce, or dark black, not removable by washing. The natives employ the outer skin of the bark for the purpose of dying the black thread of their garments."—*Yates.*

Fig. 1. Flower. *f.* 2. The same, with the petals removed. *f.* 3. Stamen. *f.* 4. Pistil. *f.* 5. Ovary, cut through vertically. *f.* 6. The same, cut through transversely:—*magnified.*

TAB. DCIII.

Melicope ternata. *Forst.*

Foliis oppositis petiolatis trifoliolatis, foliolis obovatis obtusiusculis integerrimis pellucido-punctatis glabris, paniculis axillaribus trichotomis petiolo longioribus.

Melicope ternata. *Forst. Prodr. p.* 166. *Char. Gen. t.* 28. *De Candolle Prodr.* 1, *p.* 723. *A. Rich. Fl. Nov. Zel. p.* 293. *A. Cunn. in Ann. Nat. Hist.* 3, *p.* 315.

Entoganum lævigatum. *Sol. Mst. Gærtn. Fruct.* 1, *p.* 331, *t.* 68.

Hab. New Zealand, Northern Island. *Sir J. Banks. A. Cunningham, Colenso.*

Of this likewise, an accurate description is given by Mr. Allan Cunningham in the "Annals" above quoted. I have, therefore, only to remark here, that it is the type of the genus *Melicope;* and whether or not the *M. simplex* A.C. and of us in the Sixth Volume of this Work, Tab. dlxxxv. is of the same genus, remains to be ascertained by an examination of more perfect specimens than we, at present, possess.

Fig. 1. Portion of a leaflet. *f.* 2. Flower. *f.* 3. The same, from which the petals are removed. *f.* 4. Perfect fruits; *nat. size.* *f.* 5. Single fruit. *f.* 6. The same, the seeds escaping from the cell. *f.* 7. Carpel laid open. *f.* 8. Seed laid open:— *magnified.*

TAB. DCIV.

Sedum Wallichianum. *Hook.*

Radice crassa elongata subtuberosa multicipite, caulibus erectis simplicibus foliosis, foliis lanceolatis acutis planis carnosis grosse serratis, cyma terminali foliosa, floribus pentameris (flavis).

Sedum Asiaticum. *Wall. Cat. n.* 7329 (not De Cand.)

Hab. Northern India. Gossain-Than, and Kamoun. *Dr. Wallich.*

The Herbarium specimens of this succulent plant are too imperfect to figure, and therefore I gladly avail myself of a flowering root in the Royal Gardens of Kew, raised from seeds sent by Dr. Royle; and from that the accompanying representation is taken. Eight or ten such erect and simple, leafy stems, arise from the summit of a very thick, woody root, or, more properly speaking perhaps, rhizoma. Leaves scattered, lanceolate, acute, plane but fleshy, and very coarsely and irregularly serrated. Cyme much branched and leafy, forming a broad, hemispherical head of yellow flowers, bearing small leaves upon the branches. Calyx of 5 deep segments. Petals 5, lanceolate, spreading. Stamens 10. Hypogynous glands 5, large, emarginate. Pistils 5. The habit of this plant is very similar to that of our *Rhodiola rosea* (*Sedum Rhodiola*, De Cand.) It is the *Sedum Asiaticum* of Wallich's Catalogue n. 7329 (according to my Herbarium); but it is not the plant of De Candolle (the *Rhodiola Asiatica* of Don), which has "linear-ligulate, entire, obtuse, leaves, and a few-flowered umbel.

Fig. 1. Flower. *f.* 2. Calyx, pistils, and hypogynous glands:—*magnified.*

TABS. DCV., VI.

Scytanthus Currori. *Hook.*

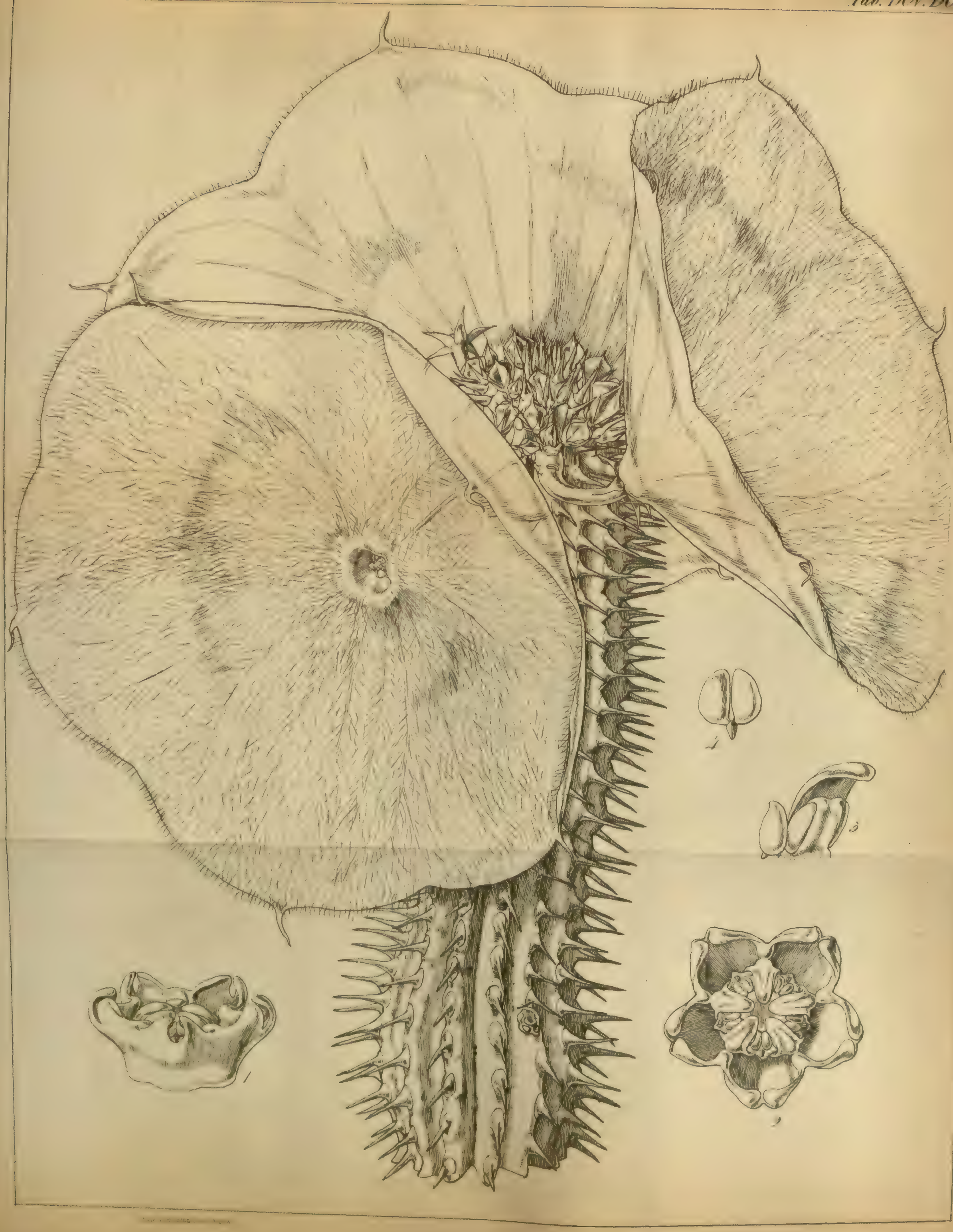
Gen. Char. Scytanthus, *Hook.*—*Cal.* 5-partitus. *Corolla* rotata, tubo brevissimo, limbo maximo dilatato concavo membranaceo nervoso obsolete 5-lobo, lobis dente aristiformi terminatis. *Columna fructificationis* inclusa. *Corona staminea* duplex; *exterior* quinquefida, lobis rotundatis erecto-incurvis obtusis bifidis, laciniis denteque in sinu inflexis; *interior* pentaphylla, foliolis e basi gibbosa oblongis obtusis in summitatem columnæ arcte adpressis, laciniis exterioribus alternantibus. *Antheræ* apice simplices, obtusæ. *Pollinia* basi affixa, erecta, ovata, sessilia. *Stigma* muticum. *Folliculi* 2 (immaturi) cylindracei utrinque acuminati, læves.—Plantæ *Africæ Australis carnosæ aphyllæ multangulatæ ramosæ, angulis aculeatis, aculeis basi dilatatis; versus apicem floriferæ.* Corolla *amplissima.*

Scytanthus *Currori*; corolla ciliata intus tota pilosa.

Hab. Barren, sandy mountains, but sparingly, at Elephant's Bay, West Coast of Africa, lat. 14 deg. S. *Dr. A. B. Curror.* R.N. 1840.

I have already, in the London Journal of Botany, v. 2, p. 166, taken occasion to mention the re-discovery, by Mr. Burke, on the banks of the Orange river, South Africa, of that most remarkable plant, *Stapelia Gordoni*, of Masson's "*Stapeliæ*," Tab. XL; which was only known to Naturalists by the figure there given, and was drawn on the spot by Colonel Gordon, and no specimen was preserved. This will be found represented at our Tab. DCXXV. of the present Volume. Still a correct knowledge of the organs of fructification was a desideratum which could not be gained from dried specimens; and it was with no small degree of pleasure that I received from Dr. Curror, of H.M.S. Water-Witch, a noble flowering specimen of another but nearly allied species, preserved in spirits, with a stem so much resembling that of some *Cactus* (of the *Cereus* group) that without the flowers, it might readily be mistaken for such. It is this plant that is here figured, and it is at once distinguished by the larger size of the stems and of the corolla, and the copious hairy lining of the latter. It attains a height of two feet and upwards in the stem, with a diameter of between two and three inches, the barren stems not unfrequently branched at the top. The whole plant is full of a viscid mucilaginous juice, which tastes like starch. There can be no doubt, I think, of the propriety of this, together with the *S. Gordoni*, Masson, constituting a distinct genus, which I have named, from the large size and general shape of the corolla, σκυτος, a *shield*, and ανθος, a *flower*. The specific name is in compliment to its discoverer, who has collected many interesting plants and animals while on the West Coast of Africa.

Fig. 1. Staminal crown; *side view.* *f.* 2. The same, seen from above. *f.* 3. Segment of the inner crown, with anther and pollen-masses. *f.* 4. Pollen:—*magnified.*



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TABS. DCVII, DCVIII.

Aciphylla squarrosa. *Forst.*

Gen. Char. Aciphylla, *G. Forst.*—*Calycis margo* 5-dentatus dentibus deciduis vel demum obsoletis. *Petala* quinque, ovata, acuta, unguiculata, apice acumine inflexa. *Fructus* oblongus, sectione transversali subteres. *Mericarpia* dissimilia, hinc jugis 4, illinc jugis tribus, omnibus alte alatis, lateralibus marginantibus. *Valleculæ et commisura* multivittatæ.—Herba *elata, robusta, erecta, simplex (?), foliis repetitim digitato-divisis pubescentibus rigidis, laciniis elongatis longissime linearisubulatis pungentibus planis striatis, petiolis dilatatis.* Umbellæ *copiosæ axillares compositæ in spicam densam foliosam longissimam crassam; foliis floralibus minoribus plerumque quinato-divisis, lacinia media duplo triplove majore validiore, arcte reflexa.* Flores *polygami.*

Aciphylla *squarrosa. Forst. Gen. t.* 38.

Ligusticum Aciphylla. *Spreng. in Schult. Syst. Veget.* 6, *p.* 554. *De Cand. Prodr.* 4, *p.* 159. *A. Rich. Fl. Nov. Zel. p.* 274. *A. Cunn. in Ann. Nat. Hist.* 2. *p.* 212.

Laserpitium Aciphylla. *Linn. Fil. Suppl. p.* 181. *Forst. Prodr. p.* 22.

Hab. New Zealand, Middle Island; Shores of Queen Charlotte's Sound; *G. Forster.* Southern extremity of the Northern Island, in great abundance; and the alpine interior; *Mr. Bidwill.* Roratonga; *Mr. Colenso.*

One of the most remarkable of umbelliferous plants, with a dense flowering spike, often four feet high. Sprengel and De Candolle say of the fruit, "*mericarpia tricostata.*" In all the fruits that I have examined, one mericarp has 3 wings, the other four, or in other words, one wing is suppressed on one side of the fruit, 2 on the other; and Forster's character is, "*fructus pentagonus,*" which is quite correct; the approximate marginal jugæ forming together two out of the five angles or wings. This circumstance, together with a peculiar habit, has induced me to restore the old genus *Aciphylla.*

Fig. 1. Fructified spike. *f.* 2. Lower leaf; *nat. size.* *f.* 3. Fruit. *f.* 4. The same, separating. *f.* 5. Transverse section of the mericarps:—*magnified.*

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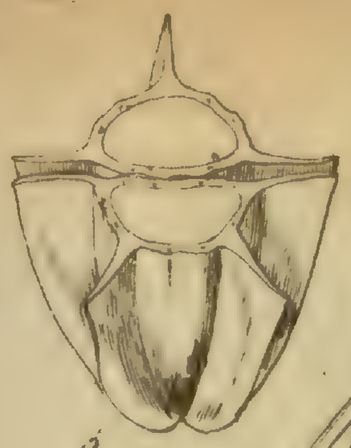

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TAB. DCIX.

Lepidium rotundum. *De Cand.*

Glabrum, bienne, caule erecto basi ramoso, foliis lineari-spathulatis obtusis, floribus parvis demum racemosis, sepalis obovatis obtusis petala subæquantibus, siliculis orbicularibus plano-convexis lato-alatis profunde angusto-emarginatis, lobis obtusis, stylo libero sinu breviore.

Lepidium rotundum. *De Cand. Prodr.* 1. *p.* 205.

Lepia rotunda. *Desv. Journ. Bot.* 3, *p.* 166 *and* 181.

Hab. King George's Sound, (*Herb. Mus. Par.*) Swan River, Australia, *Mr. Drummond*, *n.* 4.

Radix biennis, subfusiformis, flexuosa, superne in ramis plurimis, erectis, simplicibus, vel ad basin, divisa. *Folia* alterna, lineari-spathulata, integerrima, uninervia, glabra. *Flores* corymbosi, demum, planta fructifera, in racemis elongatis extensi, parvi. *Pedicelli* breves, demum elongati, superne incrassati. *Sepala* obovata, obtusa, glaberrima. *Petala* spathulata vix calyce longiora. *Stamina* 6, didynama, corollam æquantia. *Ovarium* obcordatum staminibus brevius. *Siliculæ* orbiculares plano-convexæ (hinc planæ v. subconcavæ inde convexæ) latissime alatæ, apice usque ad loculos anguste profunde emarginatæ. *Stylus* liberus sinu brevior. *Semen* quovis loculo unicum, pendulum, obovatum. *Cotyledones* ovatæ, incumbentes.

This is quite different from the *Lepidium Novæ Hollandiæ*, Desv. which is allied to *L. Piscidium*.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Stamens and pistil. *f.* 4. Silicula. *f.* 5. The same with the valves separated. *f.* 6. Transverse section of the silicula. *f.* 7. Seed. *f.* 8. Embryo: —*magnified.*

TAB. DCX.

STENOPETALUM ? PROCUMBENS. *Hook.*

Annuum, caulibus procumbentibus ramosis filiformibus, foliis sparsis lineari-spathulatis radicalibus rosulatis incisis, floribus minutis, racemis demum valde elongatis, petalis linearibus obtusis subunguiculatis vix calycem superantibus, siliculis orbiculari-ellipticis compresso-planis stigmate sessili terminatis, dissepimento nullo, seminibus numerosis, podospermis longissimis.

HAB. Swan River, Australia. *Jas. Drummond*, (*Crucif. n.* 3.)

Radix parva, annua, fibrosa. *Caules* plurimi, filiformes, ramosi, procumbentes, spithamæi et ultra. *Folia* glabra, lineari-spathulata; *radicalia* inciso-dentata; *caulina* integerrima, remota. *Pedicelli* brevissimi, demum (fructiferi) elongati, gracillimi. *Calycis sepala* oblongo-obovata, obtusa, petalis angustis breviora. *Stamina* 6, didynama. *Ovarium* orbiculare, planum, stigmate capitato sessili terminatum. *Silicula* orbiculari-elliptica, compressa, glabra. *Dissepimentum* omnino nullum. *Semina* (vix matura) parva. *Podosperma* longissima, filiformia.

Notwithstanding the absence of dissepiment to the fruit, I am unwilling to separate this plant from *Stenopetalum*, Br., with which it sufficiently accords in other respects. In the old fruit, the filiform receptacle readily separates from the valves, as shown at fig. 5; and, in a more advanced stage, the seeds, with their stalks, fall away, leaving only the slender thread-shaped ring, tipped with the minute stigma.

Fig. 1. Flower. *f.* 2. Stamens and pistil. *f.* 3. Silicula. *f.* 4. Transverse section of ditto. *f.* 5. The same, from which the valves have separated. *f.* 6. Seed and seedstalk:—*magnified.*

TAB. DCXI.

Eucalyptus spathulata. *Hook.*

Operculo cylindraceo obtuso ovario turbinato triplo longiore, foliis lineari-spathulatis acutiusculis minute punctatis, pedunculis brevibus latis compressis 3-5-floris, floribus brevi-pedicellatis.

Hab. Swan River. *Jas. Drummond*, (*Suppl. Coll. n.* 20).

Frutex ubique glaber. *Rami* teretes fusci, ramulis angulatis. *Folia* opposita, bi-triuncialia, lineari-lanceolata, obtusa, basi attenuata, viridia, obscure uninervia, utrinque sub lente punctulata. *Pedunculi* solitarii, axillares, semiunciam longi, dilatati, compressi, apice umbellatim 3-5-flori. *Flores* brevi-pedicellati, pedicellis incrassatis sensim in ovarium turbinatum truncatum intense fuscum dilatatis. *Operculum* (siccitate) pallide fuscum, cylindraceum, obtusum, ovario triplo longius. *Stamina* numerosa, primum erecta, demum patentia. *Filamenta* subincrassata, fulva. *Antheræ* parvæ. *Stylus* rectus, staminum longitudine. *Stigma* simplex.

A species of *Eucalyptus*, not distributed, I believe, in the valuable sets lately sent to his subscribers from the Swan River settlement by Mr. Drummond, but forming part of a supplementary set transmitted to the Author. It is very different from any species with which I am acquainted, or can anywhere find described.

Fig. 1. Flower, still partially covered by its operculum. *f.* 2. Ovary and style :—*magnified.*

TAB. DCXII.

Oxylobium batillum. *Hook.*

Foliis oppositis elliptico-cuneatis apice truncato-retusis coriaceis, supra glabriusculis impresso-punctatis, subtus arcte reticulatis mucronatis ramulisque dense pubescentibus, legumine ovato-acuminato hirsuto dispermo.

Hab. Swan River settlement. *Jas. Drummond,* (*Suppl. Coll. n.* 32.)

I possess no flowers of this species; but there can be little doubt of the genus to which it belongs. The leaves are coriaceous, cuneate but rounded at the base, truncate or retuse at the apex, mucronate, the angles rather obtuse, the margins a little recurved; the upper side glossy and slightly pubescent, rough with numerous depressions, paler beneath, there closely reticulated, and, as well as the young branches, downy with short dense hairs. Legumes small, chestnut-brown, slightly hairy, 2-seeded. I have named the species *Batillum* from the resemblance of the leaves to a fire-shovel.

Fig. 1. 2. Legume:—*magnified.*

TAB. DCXIII.

Rhodoplexia preissii. *Harv.*

Gen. Char. *Frons* spongiformis, rubra, e filis articulatis, reticulatim connexis, versus superficiem liberis constituta. *Sphærosporæ* sphæricæ, apicibus liberis filorum insidentes, pedicellatæ perisporio hyalino. *Harv.*

Rhodoplexia *Preissii. Harv. MSS.*

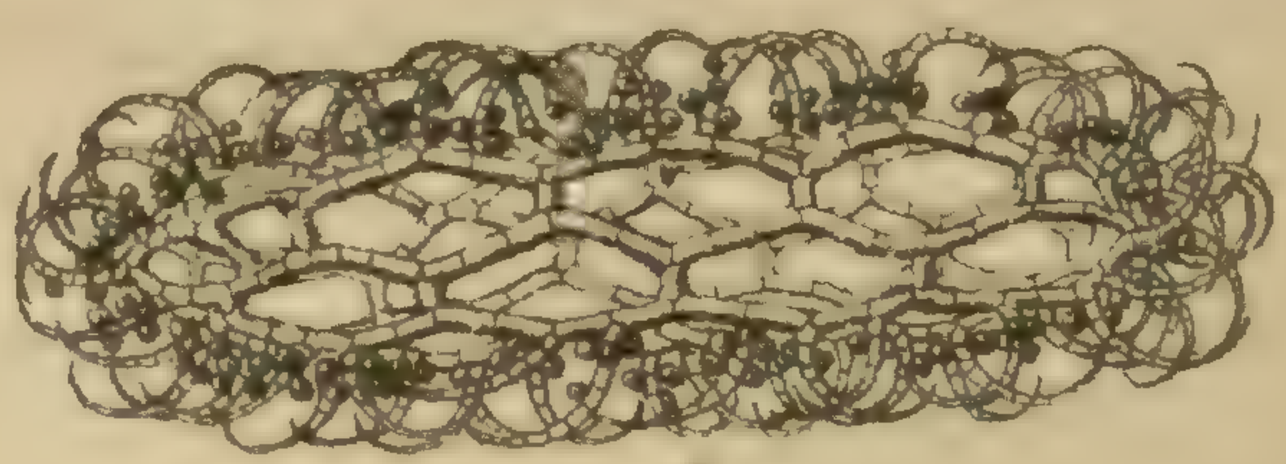
Hab. In the Sea. Swan River colony, New Holland. *Mr. Preiss.*

Frons compressa, 2-4 uncias longa, 4-6 lineas lata, ½ lineæ crassa, spongiosa, mollis, nec gelatinosa, irregulariter laciniato-ramosa, ramis plus minus dichotome divisis, axillis rotundatis, tota filis articulatis constituta. *Fila interna* in reticulo denso conjuncta, in modo subflabelliformi longitudinaliter disposita; *externa* v. *superficiaria* incurva, simplicia v. parum ramosa, lineam longa, e reticulo passim exeuntia et idem vestientia. *Color* fusco-ruber. *Sphærosporæ* omnino *Callithamnii.*

A highly remarkable plant, forming another genus of retiform *Algæ*, allied to *Dictyurus*, *Hemitrema* and *Claudea*, especially to the first; but here there is no stem, the whole plant being composed of a sponge-like network. W. H. H.

Fig. 1. Plant: *natural size.* *f.* 2. Transverse section of a narrow part of the frond. *f.* 3. Small fragment, *highly magnified*, to show the capsules, or *sphærosporæ.*

1



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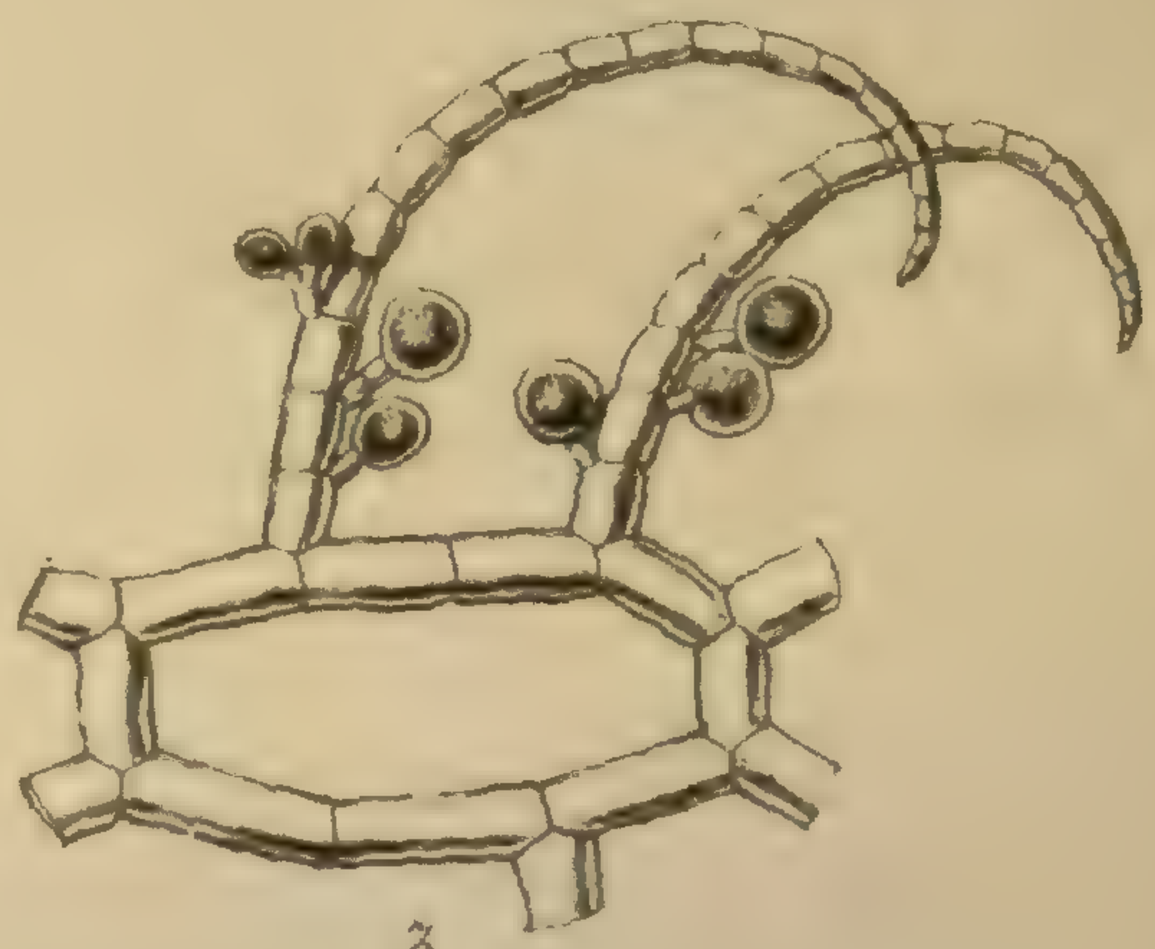

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TAB. DCXIV.

Sphacelaria hordeacea. *Harv.*

Fronde tenui-elongata stuposa, ramis alternis crebris apice fasciculatis subbipinnatis, pinnis pinnulisque spinæformibus; capsularum spicis oblongis aristatis (hordeiformibus) terminalibus.
Hab. Bay of Islands, New Zealand. *Dr. Sinclair.*

A very curious species of *Sphacelaria*, allied to *S. scoparia*, but abundantly distinguished by the spikes of fructification which terminate the branches and ramuli, and under the miscroscope strongly resemble ears of barley or rye. These are composed of thickly set, quadrifarious, setiform ramuli, each with a cluster of 4-5 elliptical capsules at its base. W. H. H.

Fig. 1. Branch. *f.* 2. Spike of capsules. *f.* 3. Ramulus of the spike, with capsules at its base :—*magnified.*

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TAB. DCXV, DCXVI.

Hartighsea spectabilis. *Adr. Juss.*

Foliis pinnatis, foliolis 3-4-jugis cum impari petiolulatis obovatis integerrimis glabris, subtus discoloribus, racemis compositis paniculatis e ramis vetustioribus pendulis, floribus 5-floris, ovario (fructuque) triloculari, capsula pyriformi-globosa.

Hartighsea spectabilis. *Ad. Juss. Mém. Mus. v.* 19. *p.* 228.

Trichilia spectabilis. *Forst. Prodr. p.* 33. *De Cand. Prodr.* 1. *p.* 623. *A. Rich. Fl. Nov. Zel. p.* 306. *All. Cunn. in Ann. Nat. Hist.* 3. *p.* 318.

Hab. New Zealand, Bay of Islands. *A. Cunningham. Bidwill. Colenso. J. D. Hooker.* Wahahé. *Dr. Sinclair.*

A tree, according to Allan Cunningham, 30 to 40 feet high, with large pinnated leaves, the leaflets often unequal at the base, petiolulated, especially the terminal one. Panicle, or compound raceme, large, springing from the older portion of the stem or branch. Calyx of 5 rounded lobes. Corolla of 5 petals, connate at the base. Staminal tube nearly as long as the petals, the mouth a little spreading, 10-crenate. Within the mouth are 10 sessile anthers, each with a gland or swelling at the base, and a short crenate cylindrical cup surrounds the ovary, which latter is conical, hairy, tapering into a filiform style, a little longer than the staminal tube. Stigma much dilated and flat at the top. Fruit a rather large, coriaceous, 3-valved, 3-celled capsule, each cell containing 2 seeds enveloped in an arillus. Mr. Bidwill informs me that the leaves of this tree are used instead of hops, and a spirituous infusion of them is a stomachic.

Fig. 1. Flower. *f.* 2. The same, the corolla spread. *f.* 3. Staminal tube laid open, to show the inner cup surrounding the ovary. *f.* 4. Anther. *f.* 5. Ovary and surrounding cup, laid open vertically. *f.* 6. Transverse section of the ovary: *magnified.* *f.* 7. Fruit:—*natural size.*

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TAB. DCXVII.

Stenopetalum draboides. *Hook.*

Annuum parvum pluricaule, caulibus erectis simplicibus parce foliosis, foliis lineari-spathulatis patentibus glabris integerrimis, racemo 4-5-floro, siliculis oblongo-obovatis compresso-planis subtortuosis unilocularibus (dissepimento nullo) minutissime puberuli-granulatis dorso basi obsolete uninervi stylo brevissimo terminatis, seminibus numerosis, podospermis longissimis.

Hab. Swan River settlement, Australia. *James Drummond,* (*Crucif. n.* 3.)

A small annual plant, (the flowers of which are unknown to me,) with quite the habit of *Draba* (or *Eriophila*) *verna*; but the leaves and stems are everywhere glabrous. Nor is the fruit in external appearance very dissimilar; larger, indeed, and longer, more coriaceous, becoming sensibly broader above, and slightly twisted; but within its structure is widely different, the membranous dissepiment, so common to the *Cruciferæ* in general, being here wholly wanting, and the numerous seeds being attached to exceedingly long podosperms. In these latter particulars the fruit exactly resembles that of our *Stenopetalum procumbens*, (Tab. dcx. of the present volume), from which, again, the size of the plant, stouter stem and shape of the fruit, will at once distinguish it.

Fig. 1. Siliculæ. *f.* 2. Side view of the same. *f.* 3. Transverse section of the same. *f.* 4. The same, with the valve removed. *f.* 5. Seed and seedstalk:—*magnified.*

TAB. DCXVIII.

Stenopetalum lineare. *Br.*

Annuum glaberrimum erectum parce ramosum, caule solitario, foliis remotis elongatis linearibus integerrimis, racemis fructiferis longissimis, sepalis lato-linearibus obtusis, petalis calyce longioribus lineari-oblongis et attenuatis longe unguiculatis, siliculis valde remotis brevissime pedicellatis erectis oblongis tereti-compressis bilocularibus valvis medio uninervibus, stylo brevissimo, podospermis vix semine longioribus.

Hab. Southern coast of New Holland. *R. Brown, Esq.* Swan River settlement. *James Drummond*, (*Crucif. n.* 1.)

I have reason to believe that this is the original *Stenopetalum lineare* of Mr. Brown, the species on which the genus was founded; but the fruit is certainly more elongated and more cylindrical than in those species of *Stenopetalum* already figured in this work, and somewhat at variance with the generic character as given by De Candolle; "*silicula ellipsoidea, compressa.* Yet, in other respects, in the erect fruit, in the size of the plant, and in the leaves, it tallies with the description; only it is said of the stem "*seta porcina vix crassior.*" Our fruit can scarcely be compared with that of *Draba,* to which De Candolle likens it.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Stamens and pistil. *f.* 4, 5. Siliculæ. *f.* 6. Transverse section of the same. *f.* 7. Silicula with the valve removed. *f.* 8. Seed and seed-stalk:—*magnified.*

TAB. DCXIX.

Eucalyptus maculata. *Hook.*

Arbor excelsa, trunco maculato, foliis alternis petiolatis lanceolatis longe acuminatis pellucido-punctatis purpureo-marginatis, nervis copiosis distinctis oblique patentibus, paniculis axillaribus terminalibusque parce ramosis folio brevioribus, operculo duplici, ext. conico-hemisphærico mucronato cupula subangulata breviore, int. (corolla) hemisphærico membranaceo nitido.

Eucalyptus sp. Spotted Gum. *Backh. mst. n.* 37.

Hab. Interior of N. Holland. *Fraser.* Maitland, Liverpool and Newcastle. *Backhouse.*

A large tree, Mr. Backhouse observes, of which the bark falls off in patches, giving it a spotted appearance. The timber is nearly equal to oak, but the sap or outer layers decay rapidly. The lid or operculum is double, inner one membranaceous; this inner one has justly been considered by Mr. Brown as the corolla, and it here forms an exactly hemisphærical glossy membranaceous cup, which often continues to adhere after the outer one has fallen away. "The gum from the tree contains benzoic acid." *Backhouse.*

Fig. 1. Cupula and style:—*magnified.*

TAB. DCXX.

Stenopetalum robustum. *Endl.*

Erectum virgatum superne ramosum parce foliosum, foliis inferioribus interrupte lyrato-pinnatifidis laciniis linearibus subobtusis, superioribus elongatis linearibus integerrimis v. remote inæqualiter dentatis, petalis unguiculatis e lata basi longissime subulatis flexuosis acuminatis, siliculis obovatis nutantibus pedicello longioribus.

S. robustum. *Endlicher in Hügel pl. Nov. Holl. p.* 4.

Hab. S. W. Australia, Freemantle (*Hügel*). *Drummond,* (*n.* 5 and 7.) King George's Sound, (*Mus. Paris.*)

A slender, twiggy, annual plant, 1-2 feet high. Stems terete, naked or sparingly leafy below, branching upwards, the branches erect. Leaves generally withering before the seeds ripen, rather fleshy, 1-1½ inch long, the lower ones more or less divided, bright green and shining, the upper more or less toothed or quite entire. Flowers at first erect, then drooping, on pedicels which are shorter than the calyx. Sepals linear-elliptical, rounded at the apex, pale coloured and tipped with green. Petals orange yellow, their apices paler, or sometimes quite white, the claw very narrow at the base, expanding, and then produced into a slender lamina 4-5 lines long. Shorter stamens seated on 2 broad glands, having 2 other erect glands pressed close to the germen, one on each side of them. Germen elongated, elliptical, with a broad, sessile stigma. Siliculæ obovate, nearly as broad as they are long, 3-5 lines long; stigma very short, valves plano-convex, seeds about 4, with short funiculi.

We have the advantage of figuring this from living specimens which flowered at the Royal Botanical Gardens of Kew, in June 1843, and were raised from seeds sent by Mr. Drummond.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Stamens and pistil. *f.* 4. Pistil. *f.* 5. Silicula: *natural size.* *f.* 6. Silicula. *f.* 7. The same, the valves separating. *f.* 8. The same, the valves removed. *f.* 9. Seed:—*magnified.*

TAB. DCXXI.

Pittosporum rhombifolium. *A. Cunn.*

Arbor, foliis coriaceis rhombeo-ovatis basi cuneatis in petiolum attenuatis grosse sinuato-serratis, floribus corymbosis, petalis ellipticis patentibus, ovario basi piloso in stipitem attenuato.

Pittosporum rhombifolium. *A. Cunn. MSS. in Herb. nostr.*

Hab. Forests of the Brisbane River, *Allan Cunningham.*

This, according to Mr. Cunningham, to whom we are indebted for a knowledge of the plant, as well as the possession of it in the Royal Botanical Gardens of Kew, attains a height of 60-80 feet. In our greenhouse, cramped in a garden pot, it becomes a flowery shrub, in the course of many years only reaching a height of 4 or 5 feet. The flowers are white, arranged in corymbs, axillary and terminal, at first sight not much unlike those of a *Cornus*. The germen, or ovary, has tufts of hairs in the broadest part; below that, it gradually tapers into a short stipes, apparent also in the fruit, which is globoso-compressed, 2-celled and bursting open into 2 valves. The species is remarkable for the coarse toothing of its leaves, and the small and densely corymbose flowers.

Fig. 1. Flower. *f.* 2. Pistil. *f.* 3. Section of the ovary:—*magnified.* *f.* 4. Fruits:—*natural size.*

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TAB. DCXXII.

Hemitelia? alternans. *Hook.*

Inermis, frondibus pinnatis v. bipinnatis, pinnis remotis petiolatis alternis oblongo-lanceolatis coriaceo-membranaceis acuminatis profunde pinnatifidis segmentis oblongis subacutis vix serrulatis, venis liberis basi furcatis, soris in venulas supra furcaturas (rarius axillaribus) seriatim dispositis inter margi-nem et costam, involucro peltato tenui-membranaceo sub-integro.

Hemitelia? alternans. *Hook. Sp. Fil. p.* 29.

Polypodium alternans. *Wall. Cat. n.* 329.

Hab. Penang. *Dr. Wallich. Lady Dalhousie.*

The Ferns, composing the family or group of *Cyatheaceæ*, present so many forms of fructification, as regards the involucre, that it seems hardly possible to limit the generic distinctions. The present does not possess the deep cup of *Cyathea*, nor the lateral and dimidiate one of *Hemitelia*. As a species, it is a very fine and distinct one, discovered by Dr. Wallich in Penang, and subsequently by Lady Dalhousie in the same island. The pinnæ are very large, deeply pinnatifid, and exhibiting fructifications in a line or series between the margin and costa of the segments. The receptacles produce copious hairs among the capsules.

Fig. 1. Portion of a segment of the pinna with sori, showing the veining. *f.* 2. Sorus, covering the involucre. *f.* 3. Involucre, most of the capsules and hairs being removed from the sorus: *magnified.*—*f.* 4. Portion of the stipes: *natural size.*

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TAB. DCXXIII.

Cyathea Beyrichiana. *Presl.*

Stipite aculeato, fronde bipinnata, rachide et costa subpubescentibus, pinnulis lanceolatis acuminatis ad rachin pinnatifidis, segmentis lineari-oblongis acutis obscure serratis subfalcatis, soris copiosis, involucro demum hemisphærico amplo.

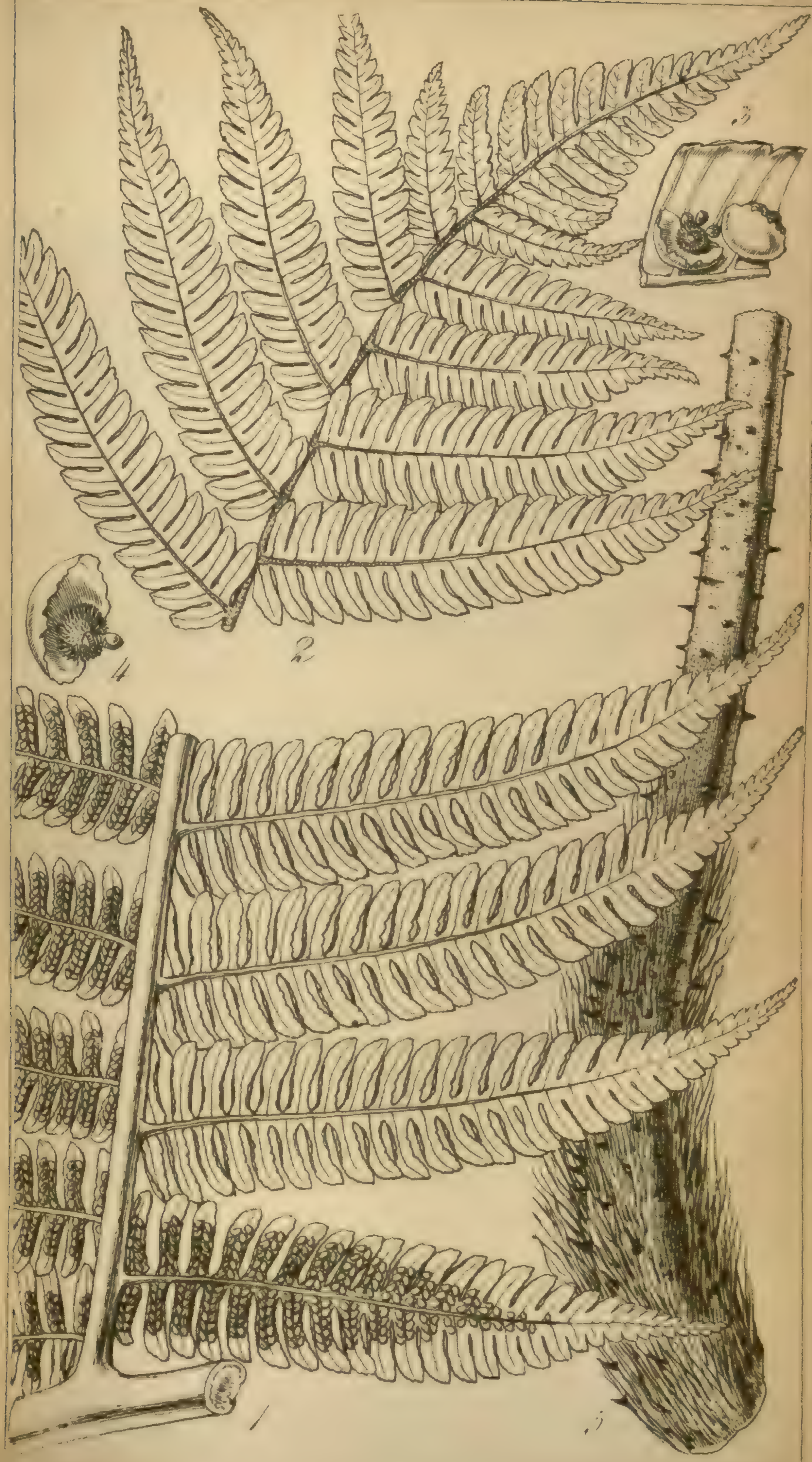
Cyathea Beyrichiana. *Presl, Tent. Pterid. p.* 55 (*name only*). *Hook. Sp. Fil. p.* 21.

Alsophila stipulacea. *Beyrich, Herb.*

Hab. Brazil; *Sellow, Beyrich.* Rio Janeiro, *Gardner*, (*n.* 135).

This again is a Fern, with as much claim to be placed in *Hemitelia* as in *Cyathea.* Could we see the involucre in its young state, we should probably find it covering the whole sorus with a globose membrane: but, in a more advanced stage, it is quite open on the outer or upper side, towards the margin of the segment; but still covering the sorus like a hood. We shall have occasion to observe a similar structure in the Ceylon *Cyathea Walkeræ.*—(See our Tab. dcxlvii.)

Fig. 1. Lower portion of a primary pinna. *f.* 2. Upper portion of ditto: *nat. size.*—*f.* 3. Portion of a segment, with sori. *f.* 4. Sorus: *magnified.*—*f.* 5. Base of a stipes: *nat. size.*


3
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TAB. DCXXIV.

Podocarpus Purdieana. *Hook.*

Foliis lanceolatis superne latioribus obtusis cum mucrone obtuso basi attenuatis sessilibus utrinque concoloribus, pedunculis solitariis unifloris, drupa receptaculi bifidi longitudine subglobosa apiculo obtuso vix obliquo.

Hab. Woods on mountain ridges, on the estate of Dunrobin Castle, the property of J. Tasker, Esq. St. Mary in the East, Jamaica; at an elevation of about 2,500 to 3,500 feet above the level of the sea. *Wm. Purdie.*

No one can look at this plant by the side of *Podocarpus coriacea*, (see *Lond. Journ. of Botany*, *v.* 1, *p.* 656, *tab.* xxi.), whether in living or dried specimens, without being satisfied of the propriety of considering them two distinct species: yet it is difficult in words to discriminate them. Both inhabit the same mountain regions in Jamaica, though not at the same elevations: yet Mr. Purdie was at no loss to perceive their differences; and to him, while on a mission as Botanical Collector for the Royal Botanic Gardens of Kew, we are wholly indebted for our knowledge of the present one. Besides the disparity in the form and size of the foliage, Mr. Purdie says; "While *P. coriacea* only attains a height of 50 feet, and a diameter of 2 feet, this new kind reaches to 120 feet or more, and is really one of the noblest trees in the island. Its growth is rapid. One tree, felled by the proprietor, measured 3 feet 6 inches in diameter, at 6 feet from the ground; and at 39 feet from the ground, 2 feet 9 inches, without a branch up to that height. Many of the branches even afford good timber." Some of the leaves are between 5 and 6 inches long.

Fig. 1. Immature fruit:—*magnified.*

TAB. DCXXV.

Scytanthus Gordoni. *Hook.*

Corolla margine intusque glaberrima.
Stapelia Gordoni. *Mass. Stap. t.* 40.
Hab. South Africa. Great Namaqua, near the Orange River. *Colonel Gordon, Burke.*

The generic character, and some remarks relating to another species of this genus, will be found at our Tabs. dcv, dcvi. The present is the original species, first detected by Colonel Gordon, and only known to the public through the figure given of it in Masson's "*Stapeliæ,*" in 1796, from a drawing made by its discoverer. So strange a form of *Stapelia* did not receive the credit it deserved from the cultivators of this singular group of plants; and by many it was considered an exaggerated, if not a fictitious representation. Mr. Burke's recent discovery of it again, has only proved the correctness of Colonel Gordon's representation; and living plants are now in the possession of the Right Hon. the Earl of Derby, at his seat of Knowsley, Lancashire. The present is much smaller in every part than the *Scytanthus Burkei*, and has the corolla quite glabrous.

TAB. DCXXVI.

Pholisma arenarium. *Nutt.*

Gen. Char. Pholisma *Nutt.*—*Calyx* profunde 6-partitus, laciniis lineari-subspathulatis. *Corolla* monopetala infundibuliformis, limbo subregulari 6-lobo, lobis rotundatis plicatis æstivatione imbricatis. *Stamina* 6, supra medium tubi inserta, inclusa, uniserialia, æqualia, lobis corollæ alternantia. *Filamenta* brevia. *Antheræ* oblongo-ovatæ obtusæ, biloculares, loculis longitudinaliter prope marginem dehiscentibus. *Ovarium* superum subglobosum ad circumferentiam multiloculare, loculis uniovulatis; ovulis ad angulum internum circa axin crassissimum affixis. *Stylus* elongatus crassiusculus inclusus. *Stigma* dilatatum, centro depresso, margine lobato-dentato. *Fructus* (immaturus) baccatus? loculis et seminibus ut in ovario. *Semina* ex angulum interiorem pendentia.—Herba *succulenta colorata in arenosis* Californiæ *proveniens*, *facie* Orobanchis, *aphylla.* Caulis *simplex squamosus.* Flores *parvi densissime spicati, ut videtur ebracteati.*

Pholisma *arenarium. Nutt. mst.*

Hab. Monterey and St. Diego, California. *Mr. Nuttall.*

A very remarkable new genus, discovered by Mr. Nuttall, evidently nearly allied to the equally little known *Corallophyllum* of Humboldt and Kunth, and which will probably with it form a distinct natural order near *Orobancheæ*, but with a widely different fruit. The two genera precisely accord in their succulent texture and in the absence of verdure, in the general structure of their calyx, corolla, pistil and ovary, or young fruit: but *Corallophyllum* has a coralloid or fungoid substance, instead of leaves or scales, an 8-lobed corolla, with 8 stamens, arranged in two series, and it is an inhabitant of Mexico.

Fig. 1. Flower, before expansion. *f.* 2. Perfect flower. *f.* 3. The corolla laid open, and pistil. *f.* 4, 5. Stamens. *f.* 6. Section of ovary. *f.* 7, 8. Stigmas in different states. *f.* 9. Immature fruit. *f.* 10. Transverse, and *f.* 11, vertical section of the same:—*magnified.*

TABS. DCXXVII, DCXXVIII.

Lomaria Colensoi. *Hook. fil.*

Caudice repente squamoso, frondibus longe stipitatis, sterilibus lato-lanceolatis integris v. ovato-lanceolatis profunde pinnatifidis, laciniis utrinque 2-3 late ovato-lanceolatis terminali longiore omnibus acuminatis marginatis integerrimis, venis approximatis fere horizontalibus bi-trifurcatis parallelis apicibus liberis clavatis, fertilibus pinnatifidis laciniis linear-acuminatis.

Lomaria heterophylla. *Colenso in Tasm. Journ. of Nat. Hist. ined.* (*not Desvaux*).

Hab. N. Zealand, Port Nicholson; *J. T. Bidwill, Esq.* In deep woods, near the Lake Waikaré; *W. Colenso, Esq.*

Allied to the Brazilian *Acrostichum heterophyllum*, Raddi, so far as the barren fronds are concerned, which are the only ones figured by that author; yet very distinct in the much longer stipes, more coriaceous frond, closer and less distinct veins, and broader and fewer segments. The sterile and fertile fronds, as will be seen by our figure, are extremely different. They have been detected by Mr. Colenso as much as 3 feet long. *J. D. H.*

Fig. 1. Sterile undivided frond. *f.* 2. Sterile pinnatifid one. *f.* 3. Fertile frond; *nat. size* (but small specimens). *f.* 4. Portion of the sterile frond:—*magnified.*

TAB. DCXXIX.

Myrtus pedunculata. *Hook. fil.*

Frutex, ramis divaricatis rigidis, ramulis copiosis brevibus, foliis (parvis) obovatis obtusis brevi-petiolatis punctulatis integerrimis coriaceis glabris, pedunculis axillaribus unifloris folio duplo longioribus, apice bibracteatis, petalis 5.

Hab. New Zealand, Northern Island, near the village of Ruatahuna, and also near the Lake Waikaré. *W. Colenso, Esq.*

Frutex 10-12-pedalis, ramis divaricatis, cortice cinereo tecta. *Ramuli* copiosi, breves, foliosi. *Folia* opposita vix semiunciam longa, coriacea, obovata, obtusa, brevissime petiolata, punctulata, obscure venosa, utrinque glaberrima, subtus pallidiora. *Pedunculi* axillares, solitarii, graciles, uniflori, folio duplo longiores, sub florem bibracteati; bracteis oppositis, tubo calycis 3-plo brevioribus, oblongis, appressis. *Calyx* 5-lobus, lobis latis. *Petala* 5, punctata. *Bacca* parva, aurantiaca, 2-locularis, 4-5-sperma.

The flowers of the plant figured, were not fully expanded. The berries on a separate specimen are small, orange-coloured, containing 4-5 seeds. *J. D. H.*

Fig. 1. Flower-bud. *f.* 2. leaf:— *magnified.*

TAB. DCXXX.

Fagus fusca. *Hook. fil.*

Foliis remotiusculis coriaceo-membranaceis perennantibus ovatis acutis grosse serratis basi cuneatis integerrimis penninerviis brevi-petiolatis demum fuscescentibus, floribus lateralibus terminalibusque, masc. ternis pedunculatis nutantibus pubescentibus, fœmineis sessilibus solitariis, cupulis alatis valvarum dorso basi lamellato-cristatis, fructus angulis lato-alatis apice subhirsutis dentatis.

Betuloides fusca. *Banks and Soland. mss.*

Hab. New Zealand, Northern Island; *Banks and Solander*, 1749; *Bidwill* (masc.); *Dieffenbach.* Wangarei and Poverty Bay; *Colenso* (fœm). Hokianga; *Edgerley.*

A handsome tree, 40-60 feet high, called "*Hutu*" by the natives. Branches striated, red brown. Branchlets clothed with minute pubescence. Leaves about an inch long, quite glabrous, ovate, acute, coarsely, almost incisely, serrated, the base cuneate entire, between coriaceous and membranaceous, at length becoming brownish, the nerves conspicuous. Flowers abundant, lateral and terminal. We possess copious male specimens from Mr. Bidwill; in these the flowers are ternate, pedunculate, drooping. Perianth turbinate, 5-6 toothed, downy as well as the peduncle. Stamens 5.6 in each perianth. Filament slightly protruded. Anthers oblong. Female flowers mostly terminal on short branchlets. Of the fructiferous plant (see Tab. dcxxxi.) we have fine specimens from Mr. Colenso. The cupule is about the size of a large pea, with longitudinal wings, the backs of the valves crested near the base with transverse lamellæ, pubescent. Nut slightly hairy, having 3 longitudinal wings, and toothed at the top.

Fig. 1. Peduncle, with male flowers :—*magnified.*

TAB. DCXXXI.

Fagus fusca. *Hook. fil.*

(Female Plant, with fruit. See the description, under the preceding Tab. dcxxx.)

Fig. 1. Fruit. *f.* 2. Nucule removed from the cupule:—*magnified.*

TAB. DCXXXII.

Callixene parviflora. *Hook. fil.*

Caule filiformi ramoso basi repente, foliis remotis distichis patentibus lineari-ellipticis nervosis acutis subcoriaceis, floribus terminalibus solitariis brevissime pedunculatis bracteatis, perianthii laciniis ellipticis concavis 3 interioribus paululum minoribus.

Hab. New Zealand, Northern Island. At the foot of large trees in the Beech forest, on the ascent of the mountains from Lake Waikaré. *W. Colenso, Esq.*

The genus *Callixene*, and but one species, has hitherto been supposed to exist only in the Falkland Islands and in Antarctic South America; and the discovery of the present in New Zealand by Mr. Colenso, is another proof of the singular botanical analogies that exist between those two very remote countries. It is even difficult to assign specific differences between the two, except they are to be found in the much smaller flowers of the present one, with the unequal sepals, and the larger and more remote foliage, and the greater stature of the entire plant; peculiarities which may, however, be due to the better soil and climate. *J. D. H.*

Fig. 1. Flower. *f.* 2. Stamens and pistil. *f.* 3, 4. Sepals. *f.* 5. Pistil. *f.* 6. Section of the ovary. *f.* 7. Fruit. *f.* 8. Section of ditto. *f.* 9. Seed:—*magnified.*

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TAB. DCXXXIII.

Loranthus (Dendrophthoe) Colensoi. *Hook. fil.*

Ramis teretibus, foliis obovato-rhombeis coriaceis obtusis petiolatis subaveniis, pedunculis axillaribus subquinquefloris, floribus longitudine fere foliorum, petalis 4, ungue basi dilatato lamina angusto-ovata 4-plo longiore.

Hab. New Zealand, Northern Island. Abundant, growing parasitically on branches of *Metrosideros tomentosa*, near Lake Waikaré. *W. Colenso, Esq.*

For the knowledge of this fine *Loranthus*, which displays a profusion of scarlet blossoms, we are indebted to Mr. Colenso. It is allied to *L. tetrasepalus*, (Linn. fil.) of the same country, and it belongs also to the same section; but may be easily recognised by the much larger size of all its parts, by the greater number of flowers on the peduncle, and the decidedly petiolated leaves. We possess another (a third) very distinct species, native of New Zealand. *J. D. H.*

Fig. 1. Flower. *f.* 2. Petal and stamen. *f.* 3. Pistil.—*magnified.*

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TAB. DCXXXIV.

Ranunculus macropus. *Hook. fil.*

Caule elongato erecto gracili glaberrimo parce ramoso, foliis longissime petiolatis flabelliformibus ternatis, foliolis cuneatis profunde 2-3 partitis, segmentis apice crenato-dentatis, pedunculis oppositifoliis elongatis erectis 1-floris, sepalis 5 obovatis petala conformia suberecta duplo superantibus, staminibus paucis, acheniis glaberrimis ovatis in stylo elongato subrecurvo sensim attenuatis.

Hab. Near the Mission Station of Kaupapa, Poverty Bay, Northern Island, New Zealand; found growing almost entirely submersed in marshy pools. *W. Colenso, Esq.*

Whole plant about 1 foot long, and but little branched. The radical petioles are rather thick, succulent, 8-10 inches long, dilated at the very base. Leaves $\frac{3}{4}$ inch long by $2\frac{1}{2}$-3 broad, between flabellate and reniform in their circumscription. Stem about as long as the root-leaves, with 3 or 4 remote, solitary peduncles, each opposite to a cauline leaf, and longer than its petiole. Flowers small, the sepals spreading, slightly concave, 3-nerved. Petals much smaller than the sepals, suberect. Achenia smooth and glabrous, with rather a long, slightly-curved style. A very remarkable plant, from the great length of its petioles, (especially those from the root) and peduncles, and the smallness of its petals as compared with the sepals. *J. D. H.*

Fig. 1. Flower. *f.* 2. Underside of ditto. *f.* 3. Head of carpels. *f.* 4. Single carpel:—*magnified.*

TAB. DCXXXV.

Gentiana bellidifolia. *Hook. fil.*

Radice valida fusiformi, caulibus brevibus adscendentibus unifloris, foliis spathulatis inferioribus confertis recurvis petiolatis subenerviis, superioribus brevioribus obovatis obtusis remotis sessilibus, segmentis calycinis ovato-ellipticis acutis, corolla late campanulata v. subrotata profunde 5-fida segmentis ovatis obtusis, ovario brevi-stipitato.

Hab. New Zealand, Northern Island. On Tongariro. *J. T. Bidwill, Esq.*

Stems and branches short, and ascending; the flowering ones only elongated, 4-5 inches in length. Leaves about an inch long, apparently rather thick, their apices rounded. Flowers terminal, solitary; the calyx is 4 lines long. Corolla 7-8 lines long, between campanulate and rotate, yellow, and streaked when dry with darker lines. Anthers from the curving of the apex of the filament, extrorse after the pollen is emitted. Ovarium elongated, stipitate; the stigma bilabiate. Allied to the *G. saxosa*, Forst. from which, according to the drawing in the British Museum, it differs in the much smaller size, shorter leaves, which are broader in proportion, and especially in the shorter and broader corolla. *J. D. H.*

Fig. 1. Corolla laid open:—*magnified.*

TAB. DCXXXVI.

Gentiana Grisebachii. *Hook. fil.*

Annua ? caule erecto gracili e basi ramoso, ramis superioribus furcatis elongatis ad apices 1-floris, foliis inferioribus petiolatis spathulatis flaccidis apicibus rotundatis, superioribus sessilibus ovatis subacutis, floribus erectis, segmentis calycinis linearibus acuminatis dorso nervosis, corolla rotato-campanulata segmentis elongato-ovatis acuminatis, ovario stipitato.

Hab. New Zealand, Northern Island. On downs between Rotuari and the base of Tongariro. *J. T. Bidwill, Esq.*

A very elegant and distinct species, belonging to Dr. Grisebach's section *Antarctophila*, to which also Forster's *G. montana* is referrible, as well as the Magellanic species, with which the present resembles in habit of growth. Stems cylindrical, slender below, increasing a little in diameter upwards, a span long. Radical leaves none, or perhaps withering as the stems elongate; cauline ones apparently flaccid, $\frac{3}{4}$ inch long, $2\frac{1}{2}$ lines broad, the upper $\frac{1}{3}$ inch long. Flowers rather small, terminal at the apices of the branches, solitary. Calyx narrow at the base, 5-angled, deeply divided into 5 linear segments, each with a stout, prominent nerve on the back, $\frac{1}{4}$ shorter than the corolla. Corolla $\frac{1}{2}$ inch long, yellow when dry, subrotate. Anthers as in the *G. bellidifolia*. *J. D. H.*

Fig. 1. Flower. *f.* 2. Corolla laid open. *f.* 3. Section of the ovary :—*magnified.*

3

TAB. DCXXXVII.

Vigna hirta. *Hook.*

Caule volubili retrorsum hirsuto, foliolis oblongo-acuminatis hirsutis intermedio petiolulato, pedunculo longissimo 2-floro glaberrimo, calyce leguminibusque rufo-villosis.

Hab. Interior of South Africa. *Burke.*

This species blossomed in the stove of the Right Hon. the Earl of Derby, and was raised from seeds sent from the interior of South Africa by Mr. Burke. The leaves are of a peculiarly thin and membranaceous texture, many of the leaflets are 5-6 inches long: the stipules are small, ovato-sagittate; the flowers inconspicuously large, pale yellowish-green; the style is densely moderately the underside beneath the stigma; the pods 4-5 ciliated on equally with the calyx and young stems, clothed inches long, and, irs. with ferruginous ha.

Fig. 1. Vexillum. *f.* 2. Ala. *f.* 3. Carina. *f.* 4. Flower, from which the petals are removed. *f.* 5. Pistil. *f.* 6. A fruit:—*magnified.*

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TAB. DCXXXVIII.

Cyathea integra. *J. Sm.*

Inermis, frondibus 2-3-pinnatis, pinnis lato-lanceolatis acuminatis pinnatifidis, segmentis lato-ovatis acutis subserratis glabris, soris plerumque rachin versus, involucris membranaceis primum hemisphæricis apice evanescentibus demum in lobis 4-5 subregularibus patentibus fissis.

Cyathea integra. *J. Sm. En. Fil. Philipp. in Hook. Journ. of Bot. v.* 3, *p.* 419 (*name only*). *Hook. Sp. Fil. v.* 1, *p.* 26.

β. *petiolata*; pinnulis sæpissime petiolatis. C. petiolata. *J. Sm. l. c. p.* 419 (*name only*).

Hab. Amboyna; (*Herb. Hook. from P. B. Webb, Esq.*) Luçon; *Cuming Herb. Philipp. n.* 120.—β, Isle of Mindora, Philippine Islands; *Cuming no.* 359.

The pinnules are less deeply divided than any of the species with which I am acquainted, and might be said to be rather lobed than pinnatifid; so that much of the fructification is placed below the sinus, between it and the costa, and all the sori are remote from the costa, as the forking of the nerves is at a distance from it.

Fig. 1. Portion of a fertile segment, with fruit; *magnified.*
f. 2. Pinnule of var. β:—*nat. size.*

Tab. DCLXVIII.

TAB. DCXXXIX.

Fagus Solandri. *Hook. fil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis undique subdistichis breviter petiolatis parvis oblongo-ellipticis utrinque rotundatis margine integerrimo siccitate recurvo, inferne appresse pubescenti-tomentosis cinerascentibus, floribus (immaturis) ♂ aggregatis sessilibus.

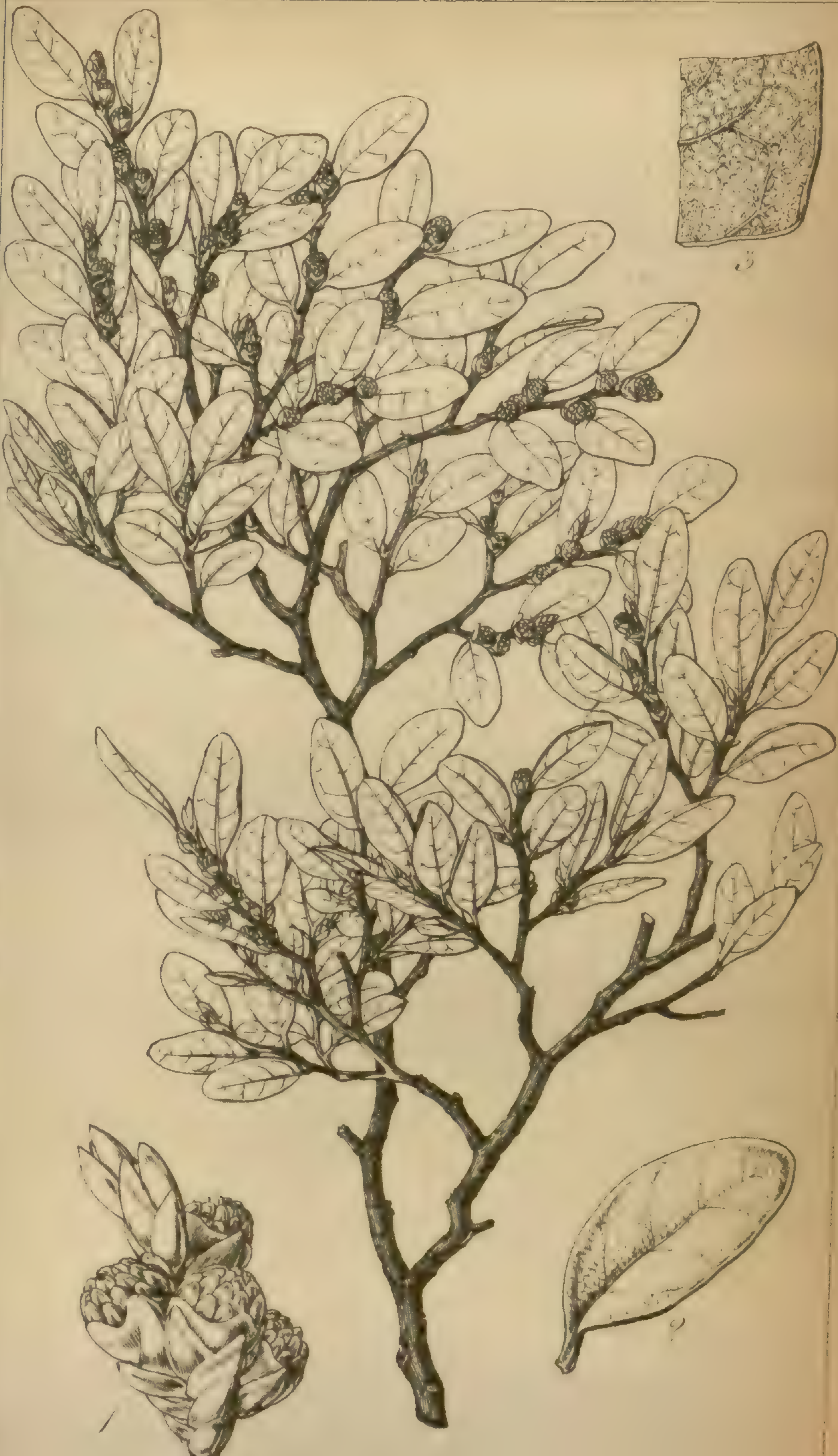
Myrtilloides cinerascens. *Banks and Sol. mss. in Herb. Banks.*

Hab. New Zealand. First discovered, but without flower or fruit, at Totara Nui, by *Sir J. Banks* and *Dr. Solander*, *in* 1769. Waiwatu; Port Nicholson. *J. T. Bidwill, Esq.* forming a tree 100 feet high. Mount Egmont; *Dr. Dieffenbach.* Tapatahi, a village near the E. coast, forming a tree 30-60 feet high; *W. Colenso, Esq.*

Branches slightly warted, of a dark-brown or fuscous black colour, their apices covered with yellowish, apparently glandular pubescence. Leaves rather loosely placed, plane and horizontal, stiff, the petioles 1 line long, pubescent, dark-coloured; lamina $\frac{1}{3}$-$\frac{1}{2}$ inch long, the upper surface scarcely shining, minutely reticulated, pale greenish-brown when dry; under surface ash-coloured with a very closely appressed tomentum, not however wholly concealing the reticulated venation. Male flowers clustered, 3 or more together, nearly sessile, densely clothed with red-brown, shining, imbricating, scariose bracteæ. Perianth cup-shaped, about 5-toothed, 5-angled, and 10-nerved; the teeth somewhat irregular, and often acute, the peduncle very short and hairy. Stamens 8, red-brown, $\frac{3}{4}$ lin. long, filaments as long as the perianth. Anthers exserted.

First discovered by Sir J. Banks and Dr. Solander, whose ms. name is quoted above. Mr. Dryander, after examining flowering specimens of a similar but distinct species, brought by Mr. Menzies from Dusky Bay, altered the name to *Cliffortioides oblongata.* ***J. D. H.***

Fig. 1. Cluster of flowers, not fully expanded. *f.* 2. Leaf. *f.* 3. Portion of ditto, seen from the underside:—*magnified.*



TAB. DCXL.

Veronica nivea. *Hook. fil.*

Fruticosa procumbens, ramis brevibus, foliis confertis decussatis patentibus nunc subsecundis ovatis rigidis brevissime petiolatis inciso-crenatis glabris, pedunculis lateralibus ramos superantibus, bracteis ovatis calycibusque glanduloso-hirsutis, racemis corymbosis 4-6 floris segmentis calycinis ovatis, corollæ lobo inferiore bifido.

Hab. New Zealand. On Tongariro, a mountain, whose altitude is estimated at 6,200 feet above the level of the sea. *J. T. Bidwill, Esq.*

A most distinct and well-marked fruticose species of *Veronica*, and very alpine in its locality. The stems are, for the size of the plant, stout, procumbent, 4-6 inches long; the branches short, ascending, leafy. Leaves closely placed, spreading on four sides, except when the branch happens to be procumbent, and then they point upwards, subsecund. Peduncles erect, and, as well as the bracteas, pedicels and calyces, densely clothed with glandular hairs. Pedicels 2-4 lines long, the upper ones gradually shorter. Corolla pure white, with the lower lobe bifid in the flower examined, (possibly by accident). It is of this *Veronica* Mr. Bidwill speaks, when describing his ascent of Tongariro, in his Rambles in New Zealand: "A few patches of a most beautiful snow-white *Veronica*, which I at first took for snow, were growing among the stones, but they ceased before I had ascended a third part of the way."

Fig. 1. Flower. *f.* 2. Calyx and pistil :—*magnified.*

TAB. DCXLI.

Cabomba Piauhyensis. *Gardn.*

Glaberrima, foliis natantibus peltatis linearibus, floribus roseis, antheris extrorsis lineari-oblongis, carpellis 2-3, seminibus echinatis.

Cabomba Piauhyensis. *Gardn. Herb. Fl. Bras. n.* 2478.

Hab. In the stagnant waters of a large lake at Algadoẽs, in the south-west of the province of Piauhy, Brazil. July, 1839.

Much diversity of opinion has existed among Botanists as to the place which *Cabomba*, and its ally *Brasenia*, ought to hold in the natural series. Jussieu put *Cabomba* among his *Junci*, by the side of *Scheuchzeria*, with the remark, "An Ranunculis affinior?" Richard, who first established a distinct order of the two genera, considered them monocotyledonous. De Candolle, in his "Prodromus," regards them as a section of *Podophylleæ*, doubting if they may not be a tribe of *Nymphæaceæ*, while Lindley, in his Natural System of Botany, makes them form a subroder of *Nymphæaceæ*, remarking that they only differ from that order in having definite seeds and distinct carpels, while *Brasenia* is closely related to *Caltha*. In his Elements of Botany he elevates them into a distinct order between *Podophylleæ* and *Cephalotaceæ*, in the Albuminous section of dissolved Exogens. Torrey and Gray do the same, placing it between *Berberidaceæ* and *Ceratophyllaceæ*. Endlicher, in his Genera Plantarum, also forms a distinct order of them, and gives it an intermediate station between *Nymphæaceæ* and *Nelumboneæ*. A careful examination and consideration of the flowers of the four species of which the genus *Cabomba* now consists, have led me to an opinion somewhat at variance from all those which we have been considering regarding their affinities. To me they appear true Ranunculaceous plants, which ought to constitute a distinct tribe between *Ranunculeæ*, DC., and *Helleboreæ*, DC., for the following reasons.—In the first place, the habit of *Cabomba* is quite that of the *Batrachium* section of *Ranunculus*, while *Brasenia* has that of *Caltha*: secondly, they exhibit the *extrorse* anthers of the greater part of the *Ranunculaceæ*, not *introrse*, as stated by all authors: and thirdly, they present the distinct carpels, the pendulous ovules, and albuminous seeds of *Ranunculaceæ*. It is true that the structure of the ovule in *Cabomba* rather resembles *Nymphæaceæ* than *Ranunculaceæ*, but the difference is not greater than is observable between that of *Nymphæaceæ* and *Nelumboneæ*, which scarcely can be considered as more than tribes of one group. *G. Gardner.*

Fig. 1. Floating leaves. *f.* 2. Flower. *f.* 3. Petal. *f.* 4 Stamen. *f.* 5. Pistil. *f.* 6. Carpels. *f.* 7. Seed. *f.* 8. Seed laid open:—*magnified.*

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TAB. DCXLII.

Cabomba Caroliniana. *A. Gray.*

Foliis natantibus peltatis ellipticis vel lineari-oblongis, petiolis pedunculisque subpubescentibus, floribus albidis, antheris extrorsis rotundato-ellipticis, carpellis 3-4 puberulis, seminibus glaberrimis.

Cabomba Caroliniana. *Gray, in Torr. et Gray, Fl. N. Am.* 1, *p.* 55. *Walpers's Repert.* 1, *p.* 105.

Cabomba Aubletii. *Mich. Fl.* 1, *p.* 206.

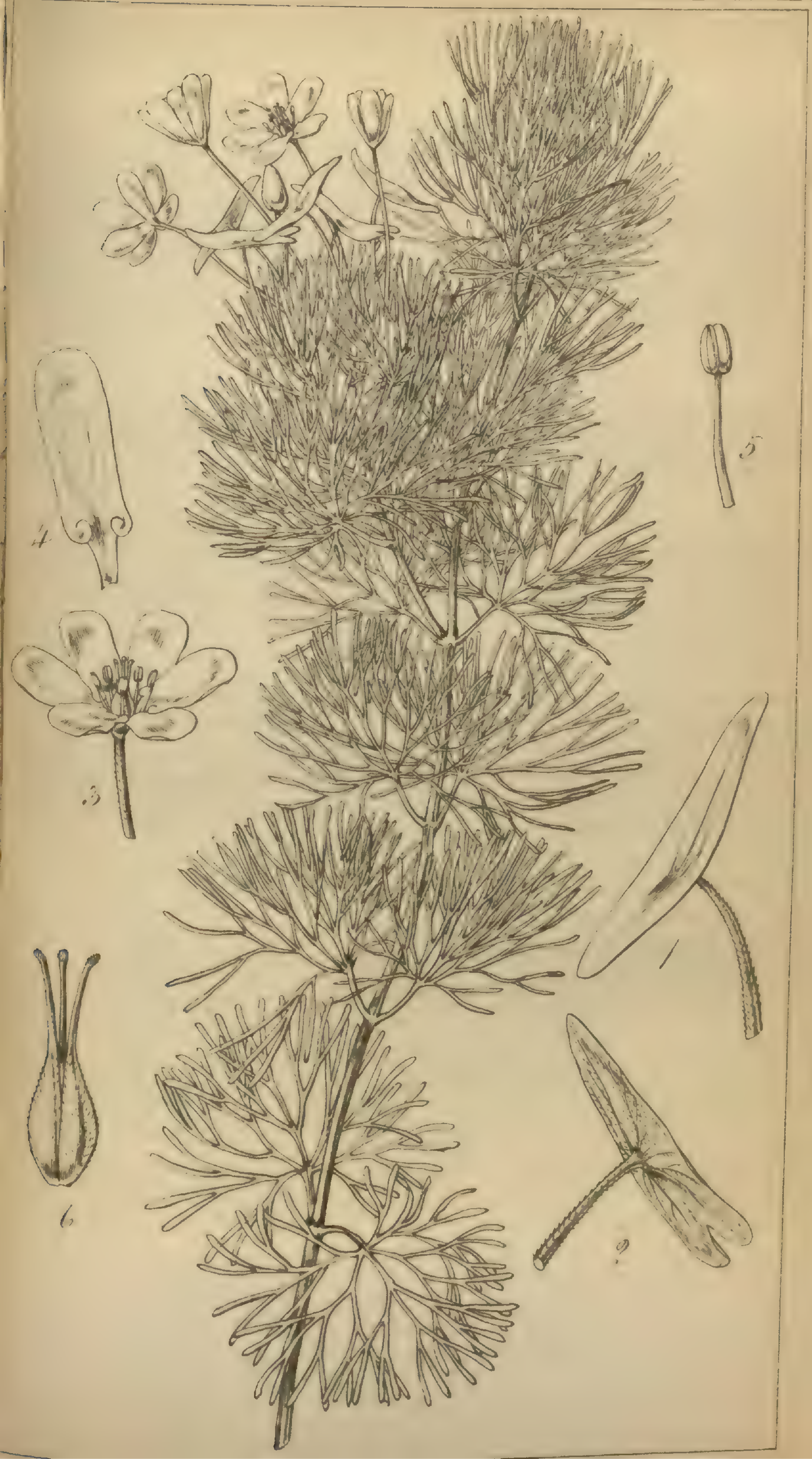
Nectris peltata. *Pursh, Fl.* 1, *p.* 239 (*excl. syn.*)

Nectris aquatica. *Nutt. Gen.* 1, *p.* 230. *Ell. Sketch,* 1, *p.* 416. (*non Willd. ex Torr. et Gray*).

Hab. In stagnant waters, from Newburn, North Carolina, to Georgia and Louisiana; *Torr. and Gray.* New Orleans; *Thos. Drummond, n.* 47.

As regards its floating foliage, this species is intermediate between *C. aquatica*, Aubl., and *C. Piauhyensis*, Gardn. From the former it is distinguished by these leaves being far narrower, and not unfrequently emarginate at one end; by its much shorter anthers, and less pubescent carpels and pedicels. From the latter, by its much narrower leaves; by its nearly round, not oblong, anthers; by its thicker and shorter carpels; the glabrous, not echinate, seeds; and the pubescent, not glabrous, petioles and peduncles. *G. Gardner.*

Fig. 1, 2. Upper and underside of differently formed floating leaves. *f.* 3. Flower. *f.* 4. Petal. *f.* 5. Stamen. *f.* 6. Pistils:—*magnified.*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TAB. DCXLIII.

Hemitelia? Parkeri. *Hook.*

Inermis? frondibus 2-3-pinnatis, rachi costa venulisque pilis divergentibus obsitis, rachi inter pinnulas alata, pinnulis sessilibus oblongo-lanceolatis obtuse acuminatis ad medium pinnatifidis subcoriaceo-membranaceis, segmentis ovatis obtusis integris, venulis liberis supra medium furcatis, soris axillaribus marginem versus, involucro parvo ciliato dimidiato sæpius ætate bifido. *Hook. Sp. Fil. v.* 1, *p.* 32.

Hab. British Guiana. *C. S. Parker, Esq.*

The winged rachis, very distinct in the upper part between the pinnules, affords a striking character to this species and the *H.? Guianensis;* but the present is easily recognised by its copious hairs, more abundant sori, and very different involucre, which I think may be considered entirely that of a *Hemitelia,* though in general habit it approaches nearer a true *Cyathea* or *Alsophila.*

Fig. 1. Portion of a segment, with fruit. *f.* 2. Involucre :— *magnified.*

TAB. DCXLIV.

Apodanthes Calliandræ. *Gardn.*

Bracteis 2-3-seriatis, seriei interioris sepalisque basi subconnatis, sepalis ovato-rotundatis.

Apodanthes Calliandræ. *Gardn. Herb. Fl. Bras. n.* 3639.

Hab. Parasitical on the stems of a species of *Calliandra*, nearly allied to *C. cylindrocarpa* Benth., in the Province of Goyaz, Brazil. 1840.

Planta parva, parasitica, atro-fusca, glaberrima, dioica, uniflora. —*Flos Masc.* desideratus.—*Flos Fœm. Bracteæ* 6-8, latè ovatæ, imbricatæ. *Perigonium* tetraphyllum foliolis ima basi connatis, æstivatione imbricatis, subrotundis, basi ovario adhærentibus. *Pseudocarpium* ovatum, subbaccatum, uniloculare. *Stylus* brevis, cinereus, crassus, conicus. *Stigma* truncatum, sub-4-lobatum. *Fructus* subcarnosus, indehiscens. *Sporæ* plurimæ, obovato-oblongæ, ad parietem pseudocarpii affixæ.

The genus *Apodanthes* was established by Poiteau in the 3rd Vol. of the *Annales des Sc. Nat.* (1824) on a small parasitical plant, which he found in Guiana, growing upon the stems of *Casearia macrophylla*, Vahl., but of which he only obtained female flowers. In 1834, M. Guillemin constituted the genus *Pilostyles*, in the 2nd Vol. of the *Nouv. Annal. des Sc. Nat.* for a plant with a similar habit to that of *Apodanthes*, which had been sent from Chili by Bertero; but of which he only possessed male flowers. The female flowers of that species have lately been sent to this country by Mr. Bridges; and a comparison of them, and those of the plant here described, and another found in Brazil by Blanchet, with the drawing and description of Poiteau, leaves no doubt as to their all belonging to one genus. In the text to the plate, Tab. dcliii. of the present Work, I shall give an amended character of the genus, and a synopsis of the species. *G. Gardner.*

Fig. 1. Section of a portion of the branch of *Calliandra*, with two perfect female flowers. *f.* 2. Separate flower. *f.* 3. The same, with the bracteas removed. *f.* 4. Ovary cut through, transversely: *magnified.* (The principal figure exhibits a branch of *Calliandra*, with the *Apodanthus Calliandræ* growing parasitically upon it: *nat. size.*

Tab. DCXLIV.

TAB. DCXLV.

Veronica diffusa. *Hook. fil.*

Suffruticosa, caulibus procumbentibus diffusis, ramis elongatis, foliis per paria remotis patentibus elliptico-ovatis acutis serratis subsessilibus glabris carnoso-coriaceis, racemis axillaribus oppositis longissimis flexuosis, bracteis parvis linearisubulatis, pedicellis elongatis calycibusque glanduloso-pubescentibus, capsulis orbiculatis segmenta calycina lato-elliptica paululum excedentibus.

Hab. New Zealand. On Tongariro. *J. T. Bidwill, Esq.*

A spreading, straggling species, with procumbent stems, its very long and opposite lateral racemes rising upwards. These latter are 6-8 inches long, with slender pedicels an inch in length. Flowers, according to Mr. Bidwill's notes, blue and white. The habit is that of our European *V. prostrata.*

Fig. 1. Flower. *f.* 2. Calyx and pistil. *f.* 3. Fruit:—*magnified.*

TAB. DCXLVI.

Hemitelia Hostmanni. *Hook.*

Stipite ad basin aculeato rachique squamosis, frondibus bipinnatis, pinnulis oblongis valde obtusis sessilibus ad basin cuneatis membranaceis pinnatifidis v. ad medium lobatis superioribus coadunatis decurrentibus, venulis simplicibus liberis, soris remotis, ad medium venulæ inferioris inter sinum v. rachin. *Hook. Sp. Fil. v.* 1, *p.* 31.

Hab. Dutch Guiana. *Hostmann, n.* 64.

A very distinct and well-marked species, of which I possess a frond about 4 feet long, including the stipes, which measures a foot and a half, rich mahogany brown, on one side densely clothed with long, dark brown, glossy scales, on the other muricated with short aculei. Pinnæ remote, the largest a foot long, sessile. Pinnules pinnatifido-lobate, of a thin and flaccid texture, veins of each lobe pinnated, only the lowest pair of veinlets bearing each near the middle a solitary sorus ; so that on the pinnules the sori are distant, and form a line remote from the margin, half-way between the sinus and rachis. The upper pinnules are confluent, at first simply combined by a decurrent wing, then united into a lobed margin, and terminating in a blunt, entire acumen. The rachis of the pinnæ is rough and somewhat scaly, that of the pinnules slightly strigoso-hispid.

Fig. 1. Fertile portion of pinnule. *f.* 2. Sorus. *f.* 3. Involucre :—*magnified.*

TAB. DCXLVII.

Cyathea Walkeræ. *Hook.*

Inermis, frondibus bipinnatis, pinnulis crassis coriaceis profunde pinnatifidis inferne pinnatis, pinnulis superioribus ad basin contractis segmentisque oblongis valde obtusis integris v. parum crenatis, costa inferiore plerumque squamosa, squamis deciduis, venis copiosis depressis basin et sæpe ad medium furcatis, soris ad furcaturas infimas costæ proximis, involucris magnis opacis ad latus superius solummodo quasi dehiscentibus in costam reflexis cuculliformibus. *Hook. Sp. Fil. v.* 1, *p.* 24.

Hab. Adam's Peak, Ceylon. *Mrs. Col. Walker.*

A very well marked species, which we have received from Mrs. Walker alone. Stipes and main rachis of a mahogany colour, flattened and grooved above when dry, naked, or with small deciduous scales below. Pinnules, as it were, jointed on the rachis, at the base pinnated, the pinnules being distinct, contracted at the base, hence elliptical. Texture firm, rigid, coriaceous, rich brown when dry, paler beneath. Involucres membranous, but firm, apparently bursting rather unequally, on the superior half vertically, and thus irregularly 2-lobed; this large, broad involucre, is reflected on the costa, and still covers in a measure the sorus, on the lower side, as with a hood. My specimens being advanced in fruit, I cannot certainly say that the involucre wholly surrounds the sorus when young: it is probable it does, and that the structure is analogous to that of *C. Beyrichiana*, Presl.—I do not look upon it as a dimidiate involucre, or I should place it in *Hemitelia.*

Fig. 1. Portion of a pinna, upper side. *f.* 2. Pinnule, with fructification, seen from beneath: *nat. size.* *f.* 3. Segment of pinnule, with sori. *f.* 4. Involucre and receptacle:—*magnified.*

TAB. DCXLVIII.

Hemitelia? Guianensis. *Hook.*

Inermis? rachi costaque inferne subsquamosa strigoso-hispidis, frondibus 2-3-pinnatis, rachi secundaria conspicue alata precipue inter pinnulas, pinnulis sessilibus oblongo-lanceolatis apicibus productis obtusis membranaceis infra medium pinnatifidis, segmentis ovatis obtusis integris, venis liberis ad medium furcatis, soris 2-3 quoque segmento axillaribus versus marginem sitis, involucro ciliato plerumque ad latus inferum sori 2-3 lobato. *Hook. Sp. Fil. v.* 1, *p.* 31.

Hab. British Guiana. *C. S. Parker, Esq.*

I do not find this anywhere described, nor am I clear that it should not be placed in *Cyathea*. In habit and form of the pinnules, it exhibits the closest affinity with *H. Parkeri*, Hook., but the involucre is dissimilar.

Fig. 1. Portion of a segment with sori. *f.* 2. Involucre and sorus :—*magnified.*

TAB. DCXLIX, DCL.

Schiedea Nuttallii. *Hook.*

Paniculis amplis ramosissimis, ramis capillaribus elongatis patentissimis, foliis brevi-petiolatis ovato-lanceolatis obscure penninerviis, sepalis pedicellisque glabris.

Eucladus suffruticosus. *Nutt. Mst.*

Hab. On the rocks of the Parri, Oahu, Sandwich Islands. *T. Nuttall, Esq.*, 1834.

This plant possesses the true character of *Schiedea*, (Chamisso and Schlechtendahl) a shrubby genus of Caryophylleous (or some have it Portulaceous) plants, as far as we can at present know, peculiar to the Sandwich Islands. It is extremely different from the only described species, *S. ligustrina*, Cham. and Schlecht. in its very ample panicle, smaller flowers, petioled and penninerved (not strongly 3-nerved) leaves. A third species exists in my Herbarium, which may be called *S. Menziesii.**

Fig. 1. Flower. *f.* 2. The same, fully expanded. *f.* 3. Petal. *f.* 4. Pistil. *f.* 5. Capsule, burst open. *f.* 6. Seed and seed-stalk. *f.* 7. Seed laid open :—*magnified.*

* Schiedea *Menziesii*; panicula erecta coarctata, foliis sessilibus anguste lanceolatis longe acuminatis trinerviis, calycibus pedicellisque pubescenti-tomentosis.

Hab. Sandwich Islands; *Menzies.*

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TAB. DCLI.

Euploca. *Nutt.*

Gen. Char. *Calyx* 5-partitus, persistens. *Corolla* subrotato-infundibuliformis, limbo plano plicato quinquangulato, fauce nuda, genitalibus inclusis. *Antheræ* sessiles, intra faucem supra stigma conniventes, apice barbatæ. *Ovarium* conicum, integrum, 4-ovulatum. *Stylus* elongatus, filiformis, deciduus. *Stigma* annulatum apice barbatum. Fructus: *Drupa* exsucca, tetrapyrena, demum quadripartibilis. *Pyrenæ* subtrigonæ, dorso convexæ, monospermæ: dissepimento centrali, ut videtur, nullo.—Herba *annua Arkansana, ramosa, tota etiam corolla externe pilis simplicibus incano-hirta; floribus axillaribus solitariis: corollæ limbo plicato convolvulaceo. Nutt.*

Euploca *convolvulacea, Nutt. in Fl. of Arkans. in Ams. Phil. Trans. v. 5. p.* 189.

Hab. Sandy plains of the Arkansas, *T. Nuttall, Esq.*

A remarkable Boragineous plant, distinguished, as a Genus, by Mr. Nuttall, to whom I am indebted for the specimens here figured. That able botanist remarks that its flowers have an agreeable odour, and open towards sunset as in *Mirabilis*. He contrasts the Genus with *Arguzia*; and Mr. Bentham has pointed out its near affinity with *Schleidenia*, Endl. (*Preslea*, Mart. Nov. Gen. Bras. 2, p. 75, t. 164. The resemblance is very close indeed; but the latter genus has a deeply lobed corolla, with 5 appendages or little hooked scales in the sinuses, and 5 tufts of hairs in the tube, filaments to the stamens, a short persistent style, and a small conical apex to the stigma, instead of a tuft or pencil of hairs.

Fig. 1. Flower. *f.* 2. Corolla. *f.* 3. Lower part of the corolla laid open, showing the stamens and pistil. *f.* 4. Stamen. *f.* 5. Pistil. *f.* 6. Scarcely mature fruit. *f.* 7. Transverse section of the same. *f.* 8. Vertical section:—*magnified.*

TAB. DCLII.

Fagus Menziesii. *Hook. fil.*

Ramis brunneis subpubescentibus, ramulis fulvo-tomentosis, foliis breviter petiolatis subrhombeo-cordatis coriaceis rigidis grosse duplicato-crenatis venosis, cupulis pedunculatis solitariis 4-partitis fimbriato-squamosis fimbriis apice incrassatis, carpellis trialatis alis superne falcato-acuminatis stylo persistente longioribus.

Hab. New Zealand; Dusky bay, southern extremity of the group, *A. Menzies, Esq.* 1791. Banks of the Lake Waikare, Northern Island, *W. Colenso, Esq., T. Bidwill, Esq.*—"*Taivai*" of the natives, according to Mr. Colenso.

Very similar to some of the states of our *F. Cunninghami* of Van Diemen's Land (see Hook. Journ. of Bot. v. 2. p. 152. t. 7.): so much so that we have sometimes been inclined to consider it the same: but besides the improbability of the same species of tree inhabiting islands so very remote from each other, there are characters that appear sufficient to distinguish them. The leaf is here more rhomboidal, and more distinctly veined. The fimbriæ of the cupules are more numerous and arise from a more decided scale; the carpels are broader upwards, and the wings are prolonged much further above the top of carpel, are more acuminated, and have, in the axils of these prolongations, soft spinous processes, a little thickened at the point, which we do not find in the *F. Cunninghami*. We are not acquainted with the male flowers, and indeed we have had only one perfect fruit to examine.

Fig. 1. Fruit bursting open. *f.* 2. *carpel.*

TAB. DCLIII.

Tropæolum tuberosum. R. & P.

Glaberrimum scandens, petiolis cirrhiformibus, foliis reniformibus 5-7-lobatis subtus glaucis, lobis latis retuso-truncatis glandula triangulari apiculatis, pedunculis longissimis (subspithamæis), calycis limbo erecto-patente in calcar longum subulato-cylindraceum obtusum apice constictum attenuato, petalis obovato-rotundatis breviter unguiculatis subæqualibus calycem paulo superantibus.

Tropæolum tuberosum. *Ruiz. et Pav. Fl. Per.* 3, *p.* 77, *t.* 314, *f.* 6. *Hook. Bot. Mag. t.* 3714.

Hab. Peru & Columbia, *Ruiz & Pavon, Hartweg, Lobb.* Ravine near *Quito, Dr. W. Jameson.*

When the plate of this was prepared I had supposed it to be a new species; so little has it of the luxuriance of the cultivated plant. I suffer it to pass, however, as being drawn from a native specimen, from Quito, and from a locality where it had not been before known to be indigenous.

Fig. 1. Flower:—*magnified.*

TAB. DCLIV.

Tradescantia gracilis. *H. B. K.*

Caule adscendente simplici vel ramoso, foliis remotiusculis brevi-vaginatis cordatis acutis vaginisque ciliatis, pedunculis solitariis v. ternis ad unum latus pubescentibus, capitulis (vix umbellis) paucifloris bracteatis, bracteis ovatis peltatis ciliatis, calycis sepalis apice barbatis, antheræ loculis remotis.

Tradescantia gracilis. *H. B. K. Nov. Gen. Am. v.* 1. *p.* 261.

Hab. Tarqui et Chillo, Quitinian Andes: elev. 8000 feet above the level of the sea, *Humboldt*. Morro of Quito, *Dr. W. Jameson*.

This has delicate white flowers, with deep purple calyx and bracteas, and anthers, of which the cells are set very wide apart by a transverse connectivum like the top of the letter T.

TAB. DCLV.

APODANTHES. *Poit. Annal. Sc. Nat.* 3. 421, *t.* 26, *f.* 1.—PILOSTYLES. *Guill. Nouv. Annal. Sc. Nat.* 2. 21, *t.* 1.—FROSTIA. *Bertero Msc. Endl. Gen. Plant. n.* 725.

CHAR. GEN. *Flores* dioici.—MASC.: *Perigonium* tetraphyllum, foliolis ima basi connatis, æstivatione imbricatis. *Synema* columnare, vertice pileolare, papillosum. *Antheræ* infra verticem sessiles, horizontales, triseriatæ, contiguæ, uniloculares, apice apertæ. *Ovarii rudimentum* nullum.—FŒM. *Perigonium* tetraphyllum, foliolis basi ovario adhærens. *Pseudocarpium* subbaccatum, uniloculare, indehiscens, multiovulatum, ovulis ad superficiem parietum pseudocarpii affixis. *Stylus* brevis, conicus. *Stigma* truncatum, sublobatum.—Herbulæ *Americanæ, atro-fuscæ*. Flores *minimi bi-tri-lineares, e cortice ramulorum aliorum stirpium prorumpentes; bracteis bi- vel tri-seriatis, seriei interioris interdum valdè connatis, calycem simulantibus.*

1. Ap. *Casearіæ;* bracteis biseriatis, seriei interioris connatis 4-lobatis, lobis obtusissimis, sepalis discretis rotundatis basi subcordatis.

Ap. Caseariæ, *Poit. Annal. des Sc. Nat.* 3, 422, *t.* 26, *f.* 1.

HAB. In Guiana, on the stems of *Casearia macrophylla*, Vahl.

2. Ap. *Berterii;* bracteis biseriatis, seriei interioris sepalisque basi subconnatis, sepalis oblongis obtusis. (TAB. NOSTR. DCLV. A).

Pilostyles Berterii, *Guill. Nouv. Annal. Sc. Nat.* 2. 21, *t.* 1.

Frostia parasitica, *Bertero Msc.*

HAB. In Chili, on the stems of an *Adesmia*. *Bertero*. *Bridges*, *n.* 1273.

3. Ap. *Calliandræ;* bracteis 2-3-seriatis, seriei interioris sepalisque basi subconnatis, sepalis ovato-rotundatis. *Gardn. supra t.* DCXLIV.)

HAB. In the Province of Goyaz, Brazil; on the stems of a species of *Calliandra*.

4. Ap. *Blanchetii;* bracteis 2-seriatis ciliatis, seriei interioris sepalisque basi subconnatis, sepalis rotundatis ciliatis. (TAB. NOSTR. DCLV. B).

HAB. Serra de Acurua, Brazil; on the stems of an entire-leaved species of *Bauhinia*. *Blanchet. n.* 2861.—*G. Gardner.*

TAB. DCLV. A. *Apodanthes Berterii*. *Fig.* 1. Female plants; *nat. size*. *f.* 2, 3. Plants; *magnified*. *f.* 4. Section of a plant. *f.* 5. Transverse section of the ovary; *more magnified*.

TAB. DCLV. B. *Apodanthes Blanchetii*. *Fig.* 1. Female plants; *nat. size*. *f.* 2. Single plant. *f.* 3. Section of ditto. *f.* 4. Transverse section of the ovary:—*magnified*.

Tab. DCIX.

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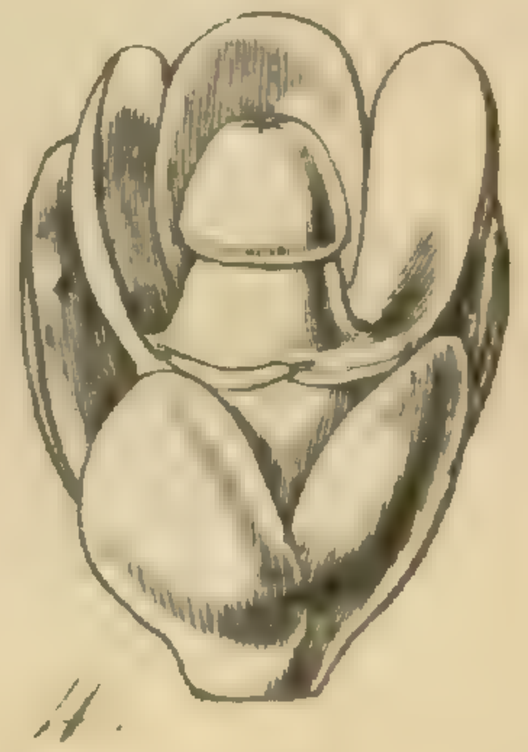

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Apodanthes Berteri Poit

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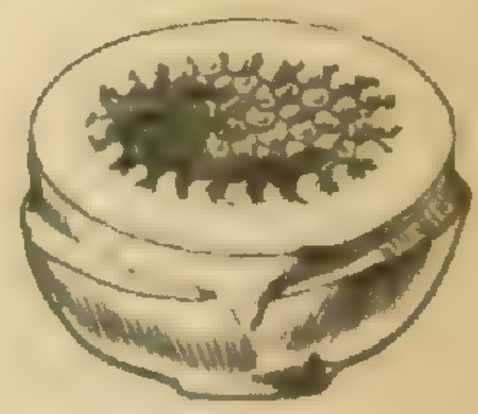

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Apodanthes Blanchetii Poit.

TAB. DCLVI.

Acrostichum (Elaphoglossum) Tambillense. *Hook.*

Caudice crasso descendente fibrilloso superne copiose squamoso, frondibus cæspitosis subcoriaceis glabris nudiusculis, sterilibus oblongo-ovatis tenui-acuminatis basi obtusis rarius oblique læviter decurrentibus, fertilibus 6-ties minoribus lanceolatis acutis, venis (utrinque) parallelis obsoletis internis, stipite frondes vix superante gracili nudo.

Hab. Sides of ravines, Tambillo, near Quito. *Dr. W. Jameson.*

The caudex of this species resembles a true rhizoma, short, thick, woody, descending, scarcely oblique, clothed with abundant fibres, of which many are 2-4-inches long, branched, black and hairy; the top of the caudex is nearly an inch wide, and clothed with a dense mass of shining, dark brown, subulate scales, from which the stipites spring, several near each other in a cæspitose manner. Sterile fronds 3-4 inches long, with a finely acuminated point, and a very obtuse base. The fertile fronds are many times smaller, lanceolate, acute, rather than acuminate, clothed beneath with pale, yellow brown capsules, the costa, and often a space on each side the costa bare. Seen under a microscope, the stipites sometimes, as well as the fronds beneath, exhibit minute, glandular, brown dots or scales, not visible to the naked eye.

Tab. DCLXV.

TAB. DCLVII.

Acrostichum (Elaphoglossum) Lloense. *Hook.*

Caudice repente squamoso, frondibus remotis, sterilibus lanceolatis submembranaceis glabris nudisculis basi in stipitem longiorem parce squamosum decurrentibus apice longe attenuatis margine integris vel obscure crenatis, fertilibus multo minoribus lato-lanceolatis obtusiusculis, venis obliquis parallelis internis obscuris.

Hab. On trunks of trees, Valley of Lloa, El Equador. *Dr. W. Jameson.*

An elegant, but small species, remarkable for its long creeping stipes, and the peculiar shape of the fronds. The veins are more oblique than is usual in *Elaphoglossum*, and the margin is often obscurely lobed, or coarsely crenate. The scales are large, for the size of the plant; on the stipes, and on the frond are a few smaller appressed ones.

Tab. DCLXII.

TAB. DCLVIII, DCLIX.

Cypripedium caudatum. *Lindl.*

Elatum ferrugineo-pubescens 3-4-florum, foliis. . . . ? sepalis lanceolato-acuminatis inferioribus omnino connatis, petalis lanceolatis in caudam longissimam fere pedalem attenuatis, labello glabro ore hirsuto, stamine sterili obtuso utrinque ala subtriangulari retusa ascendente apice pilosa, bracteis ad basin pedicellorum latis complicatis obtusissimis glabris.

Cypripedium caudatum. *Lindl. Gen. et Sp. Orchid. p.* 531.

Hab. Interior of Peru, *Ruiz* and *Pavon*, in Herb. Hook., *Mr. Lobb.*

An injured flower is all that was known of this plant when its necessarily imperfect character was drawn up by Dr. Lindley; and that flower was derived from an Herbarium left by Ruiz and Pavon in Peru, and preserved in my collection. Mr. Lobb while collecting for Mr. Veitch of Exeter, in the Andes, east of Lima, in the far interior, had the good fortune to meet with it, and sent home dried specimens, and brought living roots of it with him as far as Jamaica; but they perished while he was there confined with a malignant fever. From one of the two above-mentioned specimens, for which I am indebted to Mr. Veitch, the accompanying figure was made; but here again I have to regret the absence of foliage, so that I cannot be sure it has a scape like the species of Northern India, or, as is most likely, a leafy stem like our European and the North American and other Mexican species. In the latter case, the species must be a very stately one, for the upper portion, without the trace of a leaf is more than a foot long, everywhere clothed with a compact ferruginous down except on the bracteas, the lip, and the inside of the petals and sepals. The lower of the bracteas is $2\frac{1}{2}$ inches long, striated, broadly oval, very obtuse, folded double so as to embrace the pedicel and the main stalk; the upper ones are gradually smaller. There are 3 flowers, and a trace of a fourth, larger than those of any known species, the structure of which will be better seen by the figure than any description in words.

TAB. DCLX.

Apteria setacea. *Nutt.*

Caule gracili ramoso, foliis paucis squamiformibus acutis erecto-patentibus, perianthio urceolato-tubuloso, laciniis exterioribus 3 late ovatis obtusiusculis, interioribus 3 ligulatis obtusissimis.

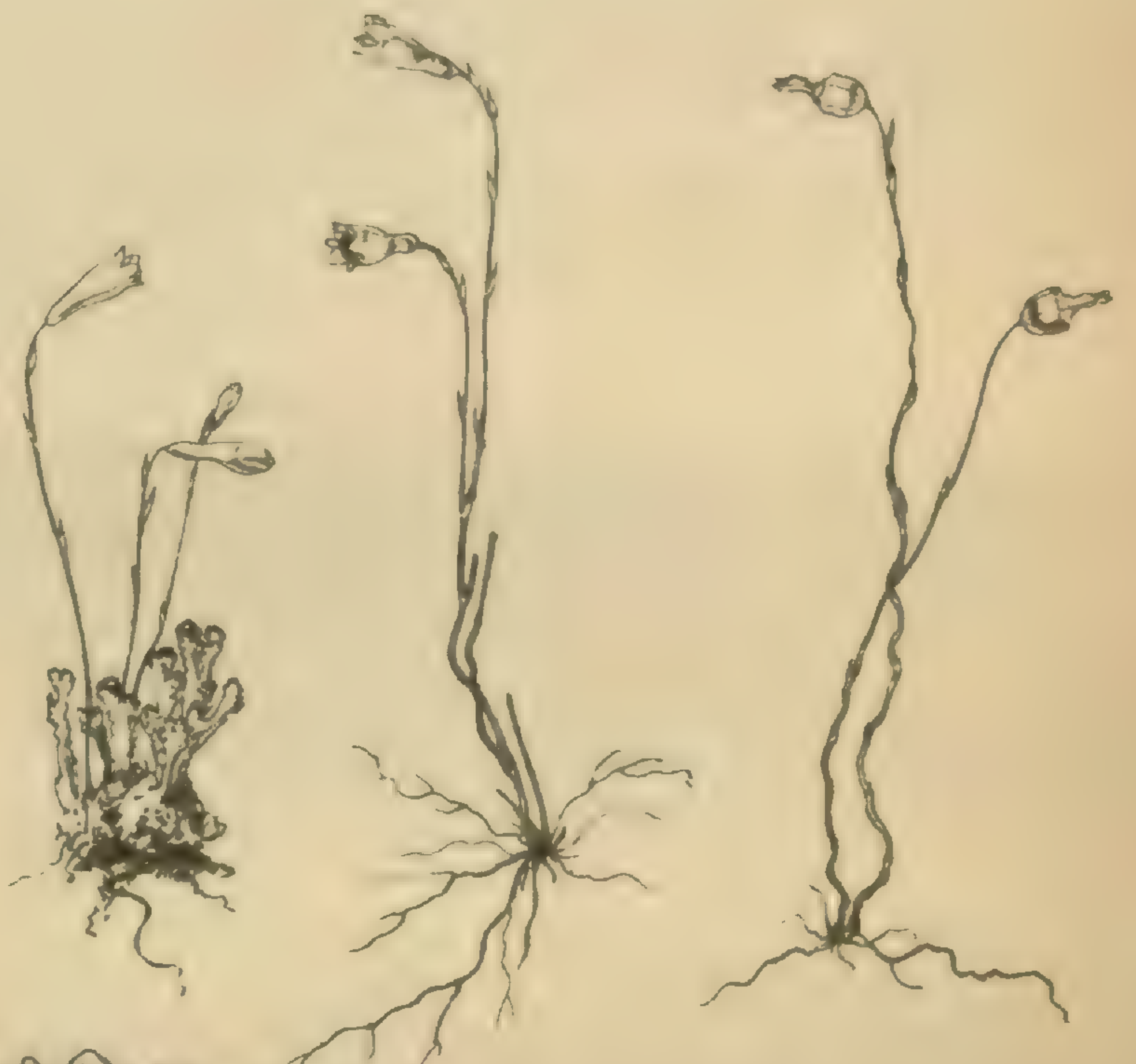
Apteria setacea. *Nutt. Journ. Acad. N. Sc. Philad.* 7, *p.* 64, *t.* 9, *f.* 1. *Miers, in Linn. Trans. v.* 18, *p.* 546.

β. *major*; triplo quadruplo major, subsexflora. A. setacea, *Benth. Pl. Hartw. p.* 67, *n.* 495.

Hab. Florida, *Nuttall.* Savannas, interior of Manchester County, Jamaica, *Mr. Purdie.*—β. Among decayed leaves, near Teotolcingo, in the mountains of Chinantla, Mexico. *Hartweg.*

I must confess that while preparing the analysis of this species, I did not at first recognize it as the original *Apteria* of Nuttall; but after a most careful comparison with that author's original specimens, I am satisfied of its identity. Its structure confirms the correctness of Mr. Miers's figure of a second species of this genus, *A. lilacina*, Miers, in a most admirable and profound paper on a new group of *Burmanniaceæ*, published by that gentleman in the 18th vol. of the Transactions of the Linnæan Society; and I am glad to have this opportunity afforded me to acknowledge my error, so ably pointed out by Mr. Miers, in uniting his genus *Dictyostegia* with *Apteria*, (in this Work, Tab. CCLIV.) which I should never have done, had I then understood the structure of *Apteria*. *A. lilacina*, of Mr. Miers, found in Brazil, is assuredly very nearly allied to the present species, which has a pretty extensive range; but it is well distinguished by Mr. Miers, in the sharp but acuminated segments of the perianth; the flower too is much larger; it droops in both species. *A. setacea* varies considerably in size. Our original specimen from Mr. Nuttall, and those from Jamaica, are from 2-4 inches high; but Mr. Hartweg's Mexican ones are 8-10 inches high, and bear as many as 6 flowers upon a stem; and they are thrice as large as in the usual state of the plant, but different in no other respect.

Fig. 1. Flower. *f.* 2. The same, with the perianth laid open, showing the style and stigmas, and the 3 hollow sacs in which the curious stamens are lodged. *f.* 3. Sac and stamen:—*more or less magnified.*



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TAB. DCLXI.

Oxalis lotoides. *H. B. K.*

Caule procumbente elongato, ramis pilosis, foliis ternatis, foliolis obcordatis emarginatis molliter appresso-pilosis margine villosis subtus glaucis, petiolis folio longioribus pilosis, stipulis adnatis majusculis fuscis, pedunculis subterminalibus elongatis 3-7 floris pedicellisque elongatis pilosis, sepalis oblongis obtusis membranaceis glabriusculis eglandulosis corolla aurantiaca duplo brevioribus, stylis stamina multo superantibus.

Oxalis lotoides. *H. B. K. Nov. Gen. Am.* 5, *p.* 421.

Hab. Quindiu, elev. of 7200 feet, *Humboldt.* Andes of Quito, *Dr. W. Jameson.*

Whole plant with a good deal the habit of *Lotus.* Stems long and decumbent. Leaves singularly glaucous beneath. Flowers orange yellow with dark streaks.

TAB. DCLXII.

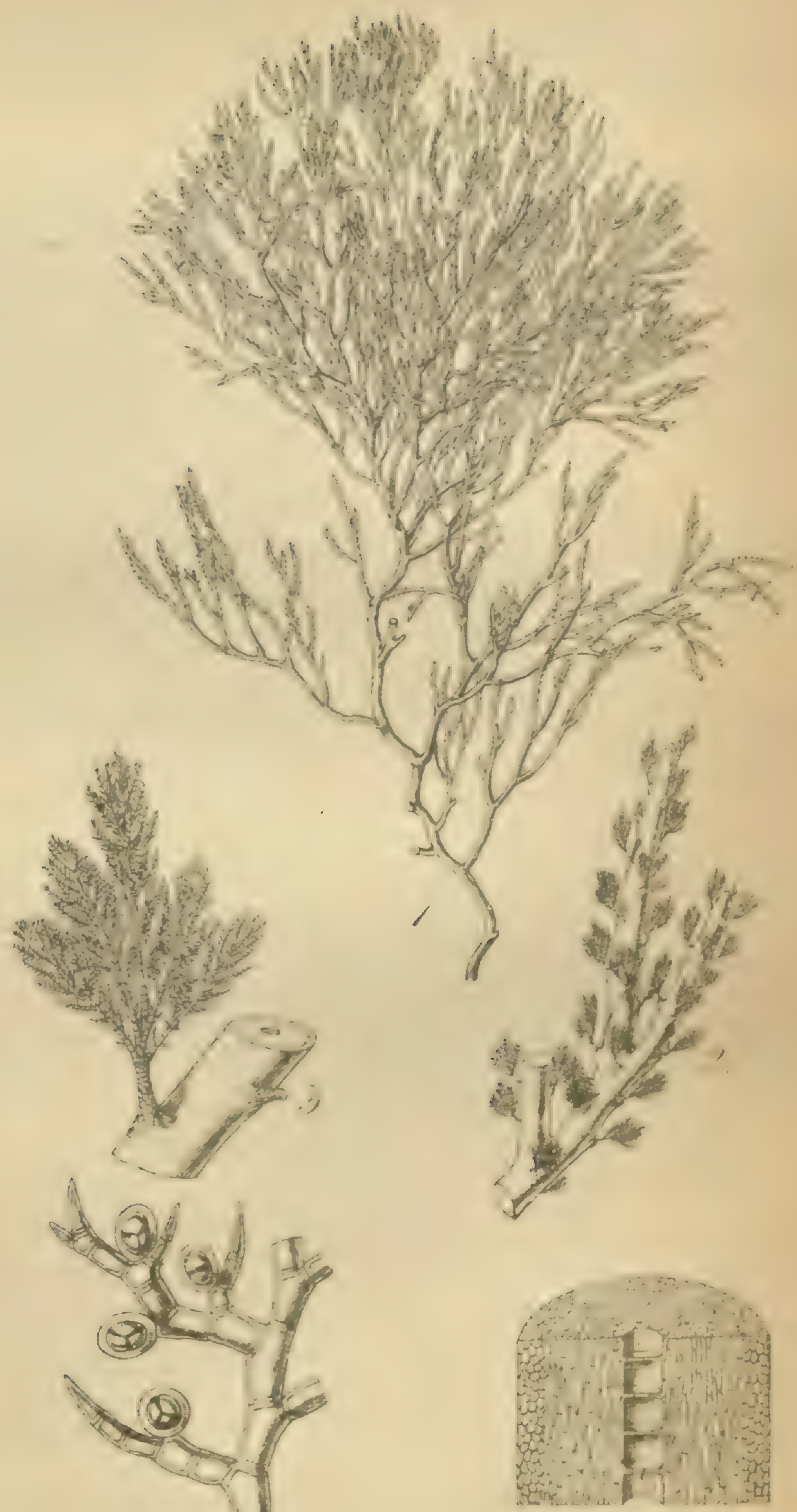
Thamnocarpus. *Harv.*

Gen. Char. *Frons* teres, ramosa, intus diaphragmatibus divisa, carnosa; caro interna e fibris articulatis, longitudinalibus, implexis, externa e cellulis minutis composita. *Sphærosporæ* in stichidiis floccosis, ramosissimis, articulatis, penicillatim e frondis glandulis superficiariis ortis, nucleo triangulatim quadripartito. T. Gunnianus. *Harv.*

Hab. Port Arthur. Van Diemen's Land. *Ronald Gunn, Esq.*

Frond 3-4 inches high, nearly half a line in diameter, much and very irregularly branched; *stem* generally simple, and rather naked below, above frequently divided into several principal branches, which are densely set in an alternate or more generally secund manner with others which are shorter, but in other respects similar, and these again are once or twice divided and furnished with short ramuli; all the branches and lesser divisions erect, or erecto-patent, with acute axils; apices acute, but frequently broken off, and appearing truncate. Sometimes the frond is excessively branched and bushy, with tufts of ramuli issuing from the broken tips of old branches. *Substance* cartilaginous when moist, horny when dry. *Colour* a fine, clear, red, discharged in fresh water. *Structure;* the *axis* is hollow, but divided into a series of cells by transverse cellular diaphragms; the flesh of the periphery very thick, its outer surface composed of minute cellules irregularly packed together, its inner substance formed of interwoven, longitudinal, jointed fibres. The *fructification* consists of *sphærospores* (or *tri-sporous capsules*) exactly similar to those of *Callithamnion*, borne on little pencils of much branched, confervoid, articulated filaments, which issue from glands scattered on the surface of the branches and ramuli; each pencil about a line long, divided into 3 or 4 principal branches, which are clothed with pinnate ramuli (or plumules) and produce an abundance of *sphærospores* on the ultimate divisions.—A very distinct genus, and quite worthy of New Holland, the land of puzzles, presenting as it does a frond outwardly resembling *Gigartina plicata* or *Griffithsia*, with a fructification which is in itself a perfect miniature *Callithamnion* (!), thus offering a new instance of the justice of Agardh's remark, that "the lower algæ are the organs of the higher." The only other genus of *Floridеæ* with an analogous fructification is *Heterocladia* of Decaisne, with which our plant will form a well-characterized sub-family, called indeed by that Author Heterocladieæ, and which may almost be regarded as the analogue among *Floridеæ* of *Sporochnoideæ.—W. H. H.*

Fig. 1. *Thamnocarpus Gunnianus; nat. size. f.* 2. Apex of a branch in fruit; *magnified. f.* 3. Pencil of fructification; *highly magnified. f.* 4. Ramulus of the pencil, with sphærospores; *highly magnified. f.* 5. Longitudinal section of stem; *magnified.*



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TAB. DCLXIII.

Loasa rupestris. *Gardn.*

Hispida, caule erecto infra inflorescentiam simplici supra paniculato-racemoso, foliis alternis petiolatis ovato-oblongis sinuato-lobatis grosse dentatis basi cordatis, racemis pedicellisque elongatis, lobis calycis late ovatis acutis, petalis obovatis obtusis concavis, capsula ovata.

Loasa rupestris. *Gardn. Herb. Bras. n.* 2413.

Causancao, *nom. vulg.*

Hab. Rare, in dry rocky places between Cachoeiras and Marmaleiro, near the Western boundary of the Province of Brazil; February, 1839.

Herbacea, hispida, 2-3 pedalis. Caulis erectus, infra foliosus, supra paniculato-racemosus, aphyllus. Folia alterna, petiolata, ovato-oblonga, obtusa, sinuato-lobata, grosse dentata, basi cordata, 4-4½ poll. longa, 2-2½ poll. lata: petioli 1½-2½ pollicares. Panicula racemosa. Flores parvi, albi, pedicellati. Pedicelli 8 lin. circiter longi. Calycis tubus ovario adhærens, limbus persistens 5-partitus æqualis, segmentis late ovatis acutis petalis brevioribus. Petala obovata, obtusa, concava. Squamæ 5, petalis alternæ, ovatæ, concavæ, trinerves, dorso trisetæ, truncatæ, in conum conniventes et basi intus filamentis 2 sterilibus instructæ. Stamina plurima, cum petalis inserta, exteriora 10, sterilia, lineari-lanceolata, ciliata, 1-nervia; interiora fertilia in phalanges 5-18-andras petalis oppositas disposita. Antheræ erectæ, subrotundæ, biloculares. Stylus simplex. Stigma trifida. Capsula ovata, hispida, calycis limbo coronata, unilocularis, vertice breviter exserto, trivalvis, valvis cum nervis placentiferis, tandem liberis, alternantibus. Semina plurima, obovata, compressa, echinata.

This plant is readily distinguished from all the hitherto described species of *Loasa* by its elongated panicle, which consists of about 5 branches, each forming a raceme of from 10-14 flowers.—*G. Gardner.*

Fig. 1. Flower. *f.* 2. Scales from the flower, with the sterile stamens:—*magnified.*

TAB. DCLXIV.

Tovaria pendula. *R. & P.*

Gen. Char. *Cal.* 8-sepalus, sepalis lineari-lanceolatis patentibus, persistentibus. *Petala* 8, disco elevato carnoso inserta linearioblonga. *Stam.* 8, disco elevato carnoso inserta, erecto-patentia. *Filamenta* subulata. *Antheræ* ovato-sagittatæ antice pilosulæ, longitudinaliter ad marginem dehiscentes. *Ovarium* ovatum, disco carnoso parvo impositum, 6-loculare, multiovulatum; *ovulis* minutis dissepimenta tota tegentibus. *Stylus* brevissimus, crassus. *Stigma* dilatatum, 6-lobum, lobis recurvis, glandulosis. *Bacca* (vix matura) globosa, stigmate 6-lobo coronata, 6-locularis, polysperma. *Semina* parva, reniformia, exalbuminosa? *Embryo* curvatus.—Herba Americæ Meridionalis, *ramosa, glabra.* Folia *alterna, trifoliolata;* foliolis *petiolulatis, lanceolatis, anguste acuminatis, penninerviis, integerrimis.* Racemi *elongati, terminales, bracteati.* Flores *majusculi, albi.* Bacca *magnitudine* Pruni avium. *Odor totius plantæ* Apii graveolentis.

Tovaria pendula. *Ruiz et Pav. Fl. Peruv. p.* 73, *p.* 306. *Don in Ed. New Phil. Journ.* 1828.

Bancroftia diffusa. *Macfad. Fl. Jam. p.* 112.

Hab. Woods between Chinchao and Pati, Peru; *Ruiz and Pavon.* Jamaica, Moore's Gap, St. George's; *Dr. Macfadyen, Purdie.* Caraccas, *Linden, n.* 244.

My first knowledge of this plant was from specimens sent by our Collector for the Royal Gardens, Mr. Purdie, from St. George's, Jamaica, where Dr. Macfadyen gathered it some years previously; and having no means of comparing it with Ruiz and Pavon's little-known Peruvian plant, *Tovaria*, and not finding it to agree with any described genus in books which were accessible to him, that gentleman constituted of it a new genus, which he dedicated to Dr. Bancroft, and detailed its characters very carefully. I have since again received the same plant from the Caraccas.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Front, and *f.* 4. Back view of a stamen. *f.* 5. Flowers, with the petals and stamens removed. *f.* 6. Section of ovary. *f.* 7. Scarcely mature leaves. *f.* 8. Transverse section of ditto; *nat. size.* *f.* 9. Seed. *f.* 10. Section of the same. *f.* 11. Embryo:—all more or less *magnified.*

TAB. DCLXV.

Tradescantia hirsuta. *H. B. K.*

Caule ascendente ramoso glabro, foliis oblongo-lanceolatis acuminatis subundulatis subtus præcipue vaginisque hirsutis laxis margine serrulato-scabris, pedunculis solitariis v. geminis plerumque bifloris, floribus brevissime pedicellatis bracteatis, sepalis glanduloso-hirsutis petalis (purpureis) duplo minoribus, antheræ loculis approximatis.

Tradescantia hirsuta. *H. B. K. Nov. Gen. Am. v.* 1. *p.* 263.

Hab. Mountains of New Grenada, about 6000-7300 feet, *Humboldt*. Pichincha, El Equador, 9000 feet, *Dr. W. Jameson*.

Sent by my valued friend, Dr. Jameson, under the above name; and it appears quite to agree with the character and description of Humboldt. It has an extensive range in South America. The flowers are large for the size of the plant, and the petals a very bright purple, which colour is retained in drying. The anther-cells are approximate, white; the filaments purple, with copious long white hairs at the base.

TAB. DCLXVI.

Trichantha minor. *Hook.*

Gen. Char. *Calyx* semia-inferus? profunde 5-partitus, segmentis in lacinias 3-5 anguste lineares longissimas profunde fissis, longe ciliatis. *Corolla* tubulosa, curvata, hinc subventricosa, crinito-hirsuta, supra basin constricta, limbo 5-lobo, extus 5-appendiculatis, appendiculis lineari-clavatis patentibus, cum lobis alternantibus; *lobis* rotundatis patentibus, 2 superioribus paulo minoribus magisque approximatis. *Stamina* 4, didynama: *Antheræ* per paria connexæ. *Fructus*— *?*—Frutices *scandentes* Caracasani, *radicantes, et, ut videtur, epiphyti, pilosi.* Folia *succulenta, carnosa, ovata, seu obovata, penninervia, opposita, unico minimo.* Flores *hirsutissimi, axillares, aggregati.* Pedunculi *uniflori.*

Trichantha *minor*; foliis ovatis acuminatis integerrimis ciliatis supra glabriusculis subtus hirsutis, corollæ tubo tereti, caule adpresse piloso.

Hab. Columbia, S. America. *Mr. W. Lobb.*

I know of no Genus to which this can be assimilated; and, though ignorant of the nature of its fruit, and, from the paucity of flowers, unwilling to destroy them for analysis, I venture to constitute of this and the following plant a new genus, which I have named from the copious and long hairs with which every part of the flower is covered.

Fig. 1. Hair, *magnified.*

Tab. DCLXVI.

TAB. DCLXVII.

Trichantha major. *Hook.*

Foliis obovatis acuminatis ciliatis utrinque hirsutis dentato-serratis, corollæ tubo subangulato, caule patenti-piloso.

Hab. Columbia, S. America. *Mr. W. Lobb.*

A very distinct species from the preceding, with much larger leaves, broader upwards, dentato almost spinuloso-serrate, hairy on both sides, with an angular tube to the corolla, and patent hairs on the stem. The general habit of the two plants is precisely similar, the same texture of leaf, the same deeply cut segments of the calyx, and the club-shaped appendages alternating with the segments of the limb of the corolla. In both, the hairs are beautifully jointed, when seen under a microscope.

Fig. 1. One of the hairs; *magnified.*

Tab. DCLXXII.

TAB. DCLXVIII.

Cryptomeria Japonica. *Don.*

Gen. Char. *Amenta* mascula spicata: *Squamæ* antheriferæ, rotundatæ, appresse imbricatæ, sessiles. *Antherarum thecæ* 5, connatæ! basi squamarum omnino adnatæ, antice foramine amplo dehiscentes. *Ovula* erecta. *Strobili* solitarii, globosi, squarrosi: *squamis* e pericarpio 3-6-dentato bracteaque lanceolata acuminata inferne concretis compositis. *Semina* 4 v. 6, compresso-angulata, vix alata.

Arbor Japonica (et Chinensis) *procera, sempervirens.* Folia *fere omnino* Araucariæ Cunninghamii, 5-*fariam ordinata, subulata, viridia, verticaliter compressa, vix pollicaria.* Amenta *mascula in spicam terminalem aggregata; fœminea solitaria globosa. Don.*

Cryptomeria *Japonica. Don, in Linn. Trans. v.* 18. *p.* 167. *t.* 13, *f.* 1.

Cupressus Japonica. *Linn. Fil. Suppl. p.* 421. *Thunb. Jap. p.* 265.

San, vulgo Sangi. *Kæmpf. Amœn. p.* 883.

Hab. Island of Nipon, and mountains about Nangasaki, Japan. *Kæmpfer, Thunberg.* China (probably Macao), *Chas. Millett, Esq.*; Chusan, *Capt. Sir Everard Home*, R. N.

My first knowledge of this plant was from a fine specimen, but without flower or fruit, sent to me by Mr. Millett from Macao. More recently I have received specimens, with cones, from Sir Everard Home, gathered at Chusan, and it is from them that the present figure is made. I do not, however, possess any male catkins; and my female ones, at any rate seed-bearing scales, differ considerably from those represented by Mr. David Don: they have a prominent keel on the under side, and I find but two seeds attached to each; and so similar is the general nature of their strobili to those of *Taxodium*, that I should be almost inclined to place the tree in that genus. The species is unquestionably the same as Mr. Don's, and has probably an extensive range. The leaves are distinctly seen to be 4-angled, with a groove or furrow between the angles, and the base of the lower angle is singularly decurrent upon the branches.

Fig. 1. Portion of a branch with leaves. *f.* 2. Scale from a strobilus seen from the back. *f.* 3. Side view of ditto with one seed. *f.* 4. Under side of scale. *f.* 5. seed:—*magnified.*

1.
2.
3.

TAB. DCLXIX.

Hemitelia Imrayana. *Hook.*

Inermis? frondibus bipinnatis glabris, pinnulis amplis late oblongo-lanceolatis acuminatis profunde pinnatifidis fere ad rachin, segmentis lanceolatis acuminatis serratis, soris uniseriatis prope marginem fere ad rachin attingentibus, venis pinnatis, venulis 2-3, infimis sæpe anastomosantibus.

Hemitelia Imrayana. *Hook. Sp. Fil.* 1, *p.* 33.

β. segmentis grosse serratis, *Hook. l. c. p.* 34. H. serrata, *J. Sm. in Hook. Lond. Journ. of Botany, v.* 1, *p.* 662 (*name only*)

Hab. Dominica, *Dr. Imray*, 1839.—*β.* Jamaica? *Wiles?* (*Herb. J. Smith*).

At first sight this has a good deal the appearance of *H. horrida*; but the pinnæ are far narrower, smaller, 10-12 inches long, apparently always glabrous, the segments serrated, the veins much less copiously branched. The *H. serrata* of J. Sm. (doubtful as to country) may I think be safely referred to this species.

Fig. 1. Pinna; *nat. size.* *f.* 2. Portions of a segment; *magnified.* *f.* 3. Sorus :—more *magnified.*

Tab. DCLXII.

TAB. DCLXX.

Anemone Jamesoni. *Hook.*

Subsericeo-hirsuta, radice repente, foliis omnibus radicalibus longissime petiolatis triternatim sectis, segmentis primariis longi- secundariisque brevi-petiolulatis ultimis cuneatis bi-trifidis lobis acutis, involucri foliolis petiolatis triternatim sectis, segmentis oblongis obtusiusculis superne latioribus, pedicellis binis, sepalis 5 ovalibus obtusis extus medio piloso-sericeis, capitulo globoso glabro, carpellis ovatis stylo subulato apice uncinato terminatis.

Hab. Hitherto found only on the mountain of Pillzum, Andes of El Equador, at an elevation of 12,000 feet above the level of the sea, *Prof. W. Jameson* (*n.* 86).

A new and very distinct species of *Anemone*, most allied perhaps to *A. triternata;* but differing from it in its much larger size, a span and more high, its petiolated involucral leaves, the few (five, not 10-12) sepals, their figure, and the short, globose, glabrous head of carpels, each tipped with a hooked, subulate style.

Fig. 1. Head of carpels; *nat. size.* *f.* 2. The same; *magnified.* *f.* 3. Single carpel:—more *magnified.*

TAB. DCLXXI.

Alsophila crinita. *Hook.*

Stipite rachique primaria pallidis elevato-punctatis muricatisque, frondibus bipinnatis coriaceis, rachi supra pilosa subtus costaque dense paleaceo-crinitis, paleis nunc brevibus minutis plerumque elongatis appressis, pinnulis sessilibus anguste lanceolatis acuminatis profunde fere ad rachin pinnatifidis, segmentis anguste ovato-oblongis subobtusis paululum falcatis margine (sicco) valde recurvis subtus pallidioribus, costa venisque sæpe pilosis, venis furcatis, soris paginas inferiores fere totas occupantibus paleis crinitis tectis.

Alsophila crinita. *Hook. Sp. Fil.* 1, *p.* 54.

Hab. Ceylon. *Mrs. Gen. Walker.*

A very remarkable species, not like any with which I am acquainted. It possesses the dark, minute tuberculations on a pale stipes and main rachis, remarked by me in *Cyathea medullaris*. The main rachis, too, and the rachis of the pinnæ, although stout, are waved and flexuose; and they are beneath quite shaggy with copious, pale-coloured scales; these are of two kinds, at least upon the main rachis, some being exceedingly small, but the majority are long, slender, subulate, more or less appressed, gradually smaller on the costæ, where they partially cover and conceal the copious fructifications.

Fig. 1. Under side of a fertile segment. *f.* 2. Sorus and scales. *f.* 3. Single scale:—*magnified.*

TAB. DCLXXII.

Berberis Darwinii. *Hook.*

Ramis junioribus rufo-pubescentibus, spinis brevibus palmato-partitis, foliis rigide coriaceis nitidis discoloribus cuneatis apice trifidis margine paucidentatis dentibus lobisque spinulosis, racemis folio longioribus, pedicellis flores duplo superantibus gracilibus, baccis (una cum stylo persistente) lageniformibus.

Hab. Chiloe, *C. Darwin, Esq.* Valdivia and Osorno, *Bridges, n.* 582, 585.

There is no difficulty in characterizing this well-marked species. The leaves are very constant to their form, sessile, but tapering more or less at their base, very rigid, glossy, especially above, pale and often rusty-coloured beneath. Peduncles twice or thrice the length of the leaves, reddish, as are the long slender pedicels, each of which has an ovate, concave scale or bractea at the base. Berries, probably not quite mature, almost black, with a glaucous tinge, shaped like a flask, the style and stigma representing the neck and head of the flask.

Fig. 1. Flower. *f.* 2. Back view of ditto. *f.* 3. Petal and stamen. *f.* 4. Pistil :—*magnified.*

Tab. DCXLVII.

TAB. DCLXXIII.

Fagus cliffortioides. *Hook. fil.*

Ramis nigro-fuscescentibus, ramulis pubescentibus foliosis, foliis ubique subdistichis breviter petiolatis parvis ovatis acutis margine planis integerrimis, inferne pubescenti-tomentosis, floribus ♂ aggregatis brevi-pedunculatis.

Cliffortioides oblongata. *Banks and Sol. mss. in Herb. Banks.*

Har. Dusky Bay, New Zealand, *Mr. Menzies.*

Similar though this is in many respects to our *F. Solandri* (Tab. Nostr. dcxxxix.) it is yet quite distinct, and apparently wholly confined to Dusky Bay, at the southern extremity of the middle island of New Zealand, where it was detected by Mr. Menzies. The leaves are truly ovate and acute, always drying of a brown colour on the upper side; the perianth 5-cleft, with rather acute segments. We regret that the fruit is unknown to us of both the species. Small as are the leaves of all the Beeches of the southern hemisphere, these two species have the smallest of all, looking not much unlike those of some *Vaccinium*.

Fig. 1. Leaf, upper side. *f.* 2. Under side of ditto. *f.* 3. Male flower:—*magnified.*

TAB. DCLXXIV.

Callixene polyphylla. *Hook.*

Elata valde ramosa, foliis copiosis oblongis subovatisve mucronulatis 5-7 nerviis transversimque (sub lente) venosis subtus glaucis, pedunculis folium fere æquantibus seu eo longioribus infra medium articulatis unibracteatis, petalis acutis maculatis, antheris incumbentibus.

Hab. S. Chili. Trunks of trees near Valdivia, where it is called "Asajur," *Bridges, n.* 679. Cape Tres Montes, *C. Darwin, Esq. n.* 531-8. Isle of Huaffo, *Dr. Eights.*

Our larger specimens of this *Callixene* indicate a truly beautiful plant; they are a foot and a half long (and yet only a portion of the entire plant) with copious foliage, numerous large and probably fragrant flowers, white, it would appear, spotted with orange. It is extremely different from the old *C. marginata* of the Falkland Islands and Cape Horn, and equally so from that of New Zealand, *C. parviflora*, of this Work, Tab. dcxxxii. Besides the greater size, copious ramifications and leaves, these latter are glaucous beneath, and quite destitute of the silvery lines so conspicuous in the other species, especially in *C. marginata*; the flowers are larger, the peduncles longer, the petals elegantly spotted. In the size and spotting of the flowers, this plant exhibits a still nearer affinity with the *Luzuriaga radicans*, R. and P.; a genus scarcely distinct from the present, except in the anthers being fixed to the apex of the short filament by their base, and not versatile, and in the peduncles being 3-flowered. All the species of the genus have distichous leaves, and Dr. Hooker found them growing frequently at the roots of the trees in Tierra del Fuego, lying flat upon the trunk. The present, from Mr. Bridges' remark, would appear to be an epiphyte.

Fig. 1. Flower. *f.* 2. Ditto, more expanded. *f.* 3, 4. Stamens. *f.* 5. Pistil. *f.* 6. Section of the ovary:—*magnified.*

2.

TABS. DCLXXV, DCLXXVI.

HYPODERRIS BROWNII. *J. Sm.*

Hypoderris Brownii. *J. Sm. in Hook. Gen. Fil. Tab.* 1. *Hook. Sp. Fil.* 1, *p.* 57.

HAB. St. Anne's Valley, Trinidad, *Mr. Lockhart.*

Caudex repens, setaceo-squamosus, crassitie *pennæ anserinæ*. *Stipes* spithamæus et ultra, setosus. *Frons* spithamæa ad pedalem, ovato-lanceolata, membranacea, supra basin contracta, sæpius profunde triloba basi cordata, lobis lateralibus multoties minoribus, lanceolatis, acuminatis; lobo medio, seu terminali, maximo, ovato-acuminato, subsinuato, ubique integerrimo. *Costa* valida. *Venæ* parallelæ, patentes, sinuosæ; venulis reticulatis connexis, ultimis nonnunquam liberis. *Sori* globosi, venis primariis paralleli, ad angulas confluentes inserti. *Involucrum* inferum, subcyathiforme, membranaceum, reticulatum, margine patente fimbriato, subciliato.

The essential character of this genus, established by Mr. Brown, consists in the inferior involucre, like that of some *Woodsiæ*, but arising from anastomosing veins, as in the *Phymatodes* group of *Polypodium*, and in the true *Aspidium* of Presl. This fine plant appears to be quite peculiar to Trinidad, and I have seen no specimens save from Mr. Lockhart.

Fig. 1. Small portion of the frond with a sorus:—*magnified.*

TAB. DCLXXVII.

Ranunculus stenopetalus, *Hook.*

Humilis dense cæspitosus glaberrimus, foliis omnibus radicalibus longe petiolatis cordatis ternatim sectis, lobis foliolisve lateralibus ovatis integris vel inæqualiter bifidis, intermedio obovato-cuneato integerrimo v. tridentato dentibus segmentisque obtusis, scapo folio brevioribus, sepalis 5 rotundato-ellipticis concavis, petalis 5 lineari-lanceolatis prope medium nectariferis.

Hab. Shores of the Bay of Valdivia, S. Chili, growing within tide-mark, *Bridges, n.* 11.

This has a considerable resemblance to *R. biternatus* of the Falkland Islands and Tierra del Fuego. figured at our Tab. cdxcvii, especially in size and general aspect; but in that the leaves are more compound, with their lobes or leaflets distinctly petiolulate, and the petals are 6-8. It approaches still nearer to *R. acaulis*, Banks and Sol., and Hook. fil. Fl. Antarct. Tab. 2, from New Zealand and Lord Auckland's Islands, especially in the form of the leaves; but that species has creeping or stoloniferous, filiform stems, spathulate petals, and a nectary placed above the middle of the petal.

Fig. 1. Leaf. *f.* 2. Flower. *f.* 3. Outside view of a flower, showing the calyx. *f.* 4. Petals;—*magnified.*

2
1
3
1

TAB. DCLXXVIII.

Dioscorea pusilla, *Hook.*

Nana herbacea, tubere subrotundo undique fibroso, ramis patentibus diffusis, foliis petiolatis cordatis retusis mucronatis 7-9-nerviis, pedunculis axillaribus, masc. 3-5-floris, fœm. subunifloris vix folium superantibus, flore fœmineo basi bibracteato.

Hab. About Valparaiso, *Bridges, n.* 166. *Cuming, n.* 686. (or 886?)

Radix: tuber subrotundum, copiose fibrosum. Caulis debilis, subpalmaris, filiformis, ramosus; ramis diffusis, vix scandentibus, flexuosis. Folia alterna, petiolata, subrotundo-cordata. Pedunculi axillares, solitarii; *masc.* 2-5-flori, pedicellis elongatis gracillimis, basi bracteatis; *fœm.* plerumque uniflori, apice sub ovario bibracteati, bracteis ovatis membranaceis, appressis. Flores parvi, inconspicui: *masc.* perianthium profunde in 6 lacinias ovatas demum reflexas fissum. Stam. 6, singulo ad basin singulæ laciniæ: Filamenta brevissima: Antheræ subrotundæ. Ovarii rudimentum nullum infra perianthium: supra ovarium abortivum crassiusculum, cylindraceum: Styli 3 patentes subulati.—*Fœm.* Perianthii tubus ovario adnatus, triangularis, elongatus, superne attenuatus; limbus 6-partitus ut in masc. Staminum rudimenta ad basin limbi calycini. Styli 3 lato-subulati, patentes, basi in columnam uniti.

The smallest of all the hitherto discovered species of this extensive genus, and only known to me from the specimens communicated by the two collectors above-mentioned, and from living plants in Mr. Veitch's Nursery.

Fig. 1. Female plant; *nat. size.* *f.* 2. Flower. *f.* 3. Transverse section of ovary. *f.* 4. Vertical ditto. *f.* 5. Portion of a male plant. *f.* 6. Male flower.—All but *f.* 1 & 5, *magnified.*

TAB. DCLXXIX.

Cryptonemia? Forbesii, *Harv.*

Caule cylindraceo cartilagineo dichotomo, foliis exacte reniformibus sessilibus amplexicaulibus horizontalibus fusco-rubris coriaceis.

Hab. Dredged in the Mediterranean Sea, 8 miles off the Island of Paros in 50 fathom water, *Prof. Edward Forbes*, 1841.

Stem cylindrical, solid, nearly ½ a line in diameter, at first simple, about a quarter of an inch long, and expanding at the apex into a horizontal reniform leaf; then lengthening, by the growth of the summit through the base of the leaf (which thus becomes amplexicaul to the new stem,) and expanding into a new leaf; and so it continues alternately lengthening and forming new leaves at intervals of from a quarter to half an inch; each leaf, which at first was terminal, becoming by the successive growths of the stem, lateral and amplexicaul. As the stem advances, it is forked at every second or third leaf, and this being repeated, an irregularly dichotomous leafy frond is at length formed. Leaves about half an inch asunder, ½-¾ inch in diameter, exactly reniform, somewhat wavy, coriaceo-membranaceous, thickish, without vein or rib, dull brownish-red, of a very dense structure, consisting, *internally*, of a close web of slender, entangled, somewhat coloured fibres, *externally* of a stratum of minute polygonal cellules. *Fruit* unknown.

The genus to which this very remarkable plant belongs is extremely doubtful, and probably, when the fruit is known, it will be found necessary to constitute it the type of a new one. I refer it provisionally to *Cryptonemia*, Ag., on account of a resemblance in the structure of the frond, but its mode of foliation is altogether peculiar, and the colour reminds us more of that of the *Rhodomeleæ*, than of any species of *Cryptonemia*. One drawing is made from a single specimen in the Herbarium of Prof. Forbes.—*W. H. Harvey.*

Fig. 1. Leaf, slightly *magnified*. *f.* 2. Transverse section of the same; *magnified*.

TAB. DCLXXX.

Stellaria decipiens, *Hook. fil.*

Glabra, caule decumbente dichotome ramoso, foliis recurvis omnibus (etiam supremis) petiolatis obovato-rhombeis acutis apice callosis carnosulis siccitate punctis minutis elevatis asperis, petiolis subciliatis, pedunculis di-trichotomis (rarius unifloris) folia plerumque superantibus ad furcaturam pedicelloque unico medium versus 2-bracteatis, bracteis ovatis acutis scariosis albidis, petalis 5 bipartitis calycem æquantibus interdum brevioribus v. nullis filamentisque ima basi dilatatis fere hypogynis, stylis 3.

Stellaria decipiens, *Hook. fil. Fl. Antarctica, v.* 1, *p.* 7.

Hab. Lord Auckland's and Campbell's Islands; common on the low grounds, especially in the woods, and near the sea.

Caules tetragoni, e basi valde ramosi, filiformes, 3-5 unc. longi. *Folia* carnosula, 3-5 lin. longa, obovata seu rhomboidea, hinc inde siccitate minute tuberculata. *Petioli* 1-3 lin. longi, latiusculi. *Pedunculi* folio plerumque longiores, solitarii, raro uniflori, bifidi seu trifidi; ramis inæqualibus. *Petala* sæpe 0.

In many respects this agrees with the S. *uliginosa*, Murr., and more particularly in the size and arrangement of the inflorescence; but the stems are always decumbent, the leaves all petiolate, very patent or recurved, and not at all broader, or ovate, at the base; the callous apices are common to both species. The peduncles generally bear two pedicels, which have a pair of bracts at the base, and a pair on one of the pedicels; whereas in *S. uliginosa* the peduncle is trichotomously divided, with the intermediate pedicel only destitute of bracts. The styles seem to be constantly three, and the stamens and petals are less decidedly perigynous than in the latter plant. In form, the leaves resemble those of *S. media*, With.; but the inflorescence is very different, and the stem wants the alternate line of hairs.—*J. D. H.*

Fig. 1. Expanded flower. *f.* 2. Petal. *f.* 3. Stamen. *f.* 4. Pistil;—*magnified.*

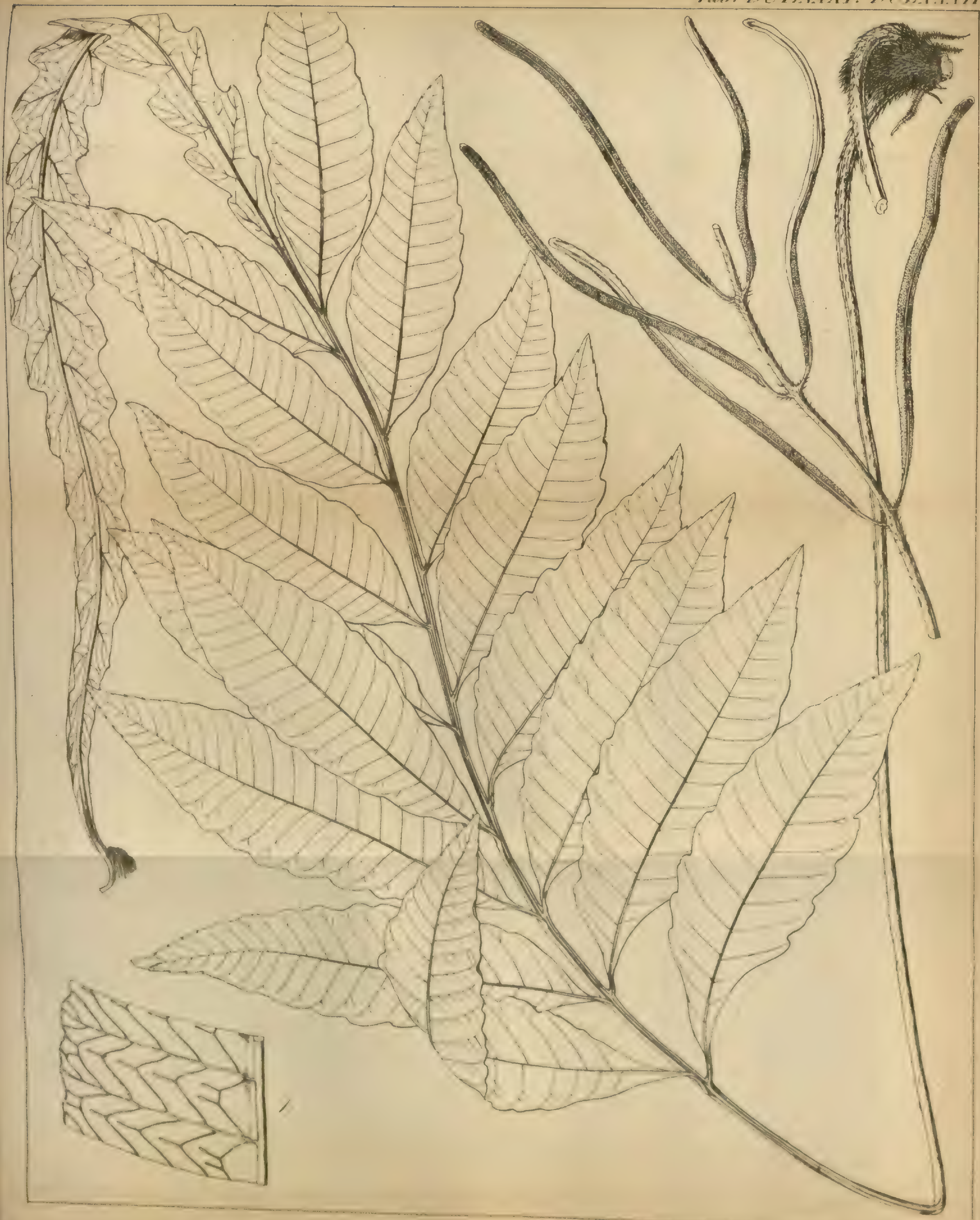
TABS. DCLXXXI, DCLXXXII.

Acrosthicum (Campium) proliferum, *Hook.*

Caudice repente, frondibus pinnatis, pinnis petiolatis sterilibus oblongis basi acutis apice acuminatis acumine serrato terminali longissimo sinuato-pinnatifido apice prolifero bulbifero radicante, fertilibus lineari-elongatis facie superna condupli-catis.

Hab. Bombay, *Dr. Falconer*.

I am indebted to Dr. Falconer for this new *Acrostichum*, which he received from Bombay. It belongs to a group having the veins united by transverse arched veinlets which give out, from the middle, one or more veinlets; of these secondary veinlets the lower ones are free, and the upper ones often unite with the transverse veinlets above, and then they anastomose in greater or less degree towards the margin. This veining constitutes the Genus *Campium* of Presl, and we have examples in the *Acrostichum subcrenatum*, Hook. et Grev. Ic. Fil. t. 110. & *A. virens*, Ic. Fil. t. 221. From those species ours is abundantly distinct. Indeed, in general appearance it more nearly resembles the *A. flagelliferum* (Ic. Fil. t. 23); but the pinnæ are more numerous, and the fertile pinnæ and the venation are very different.



TAB. DCLXXXIII.

Loranthus albiflorus, *Hook.*

Foliis suboppositis lato-lanceolatis acuminatis integerrimis coriaceis basi in stipitem perbrevem decurrentibus, paniculis compactis axillaribus folio brevioribus, ramulis trifloris, bracteis minutissimis squamæformibus, petalis 6 e basi ad medium erectis approximatis dein reflexis, filamentis basi liberis, antheris ovatis subsagittatis mucronato-acutis dorso affixis, stylo longitudine staminum apice obliquo.

Hab. Andes of Quito, elev. 8500 feet, *Dr. W. Jameson.*

I do not find this anywhere described. It must, in a recent state, be a very handsome species, loaded with its copious panicles of rather large white flowers, shorter, indeed, than the leaves, but very conspicuous from their number, arising as they do from the axils of all the upper leaves. The anthers are large and versatile, or attached by their back to the apex of the filament.

Fig. 1. Flower. *f.* 2. Calyx and Pistil. *f.* 3. Anther;—*magnified.*

2.
1.

TAB. DCLXXXIV.

Campanula Vidalii, *H. C. Watson.*

Fruticulosa viscida, foliis imbricatis (sæpius in rosulas terminales confertis) crassis coriaceis glabris spatulato-oblongis crenatis marginibus revolutis, superioribus sparsis lanceolatis subintegris, floribus racemosis cernuis, lobis calycis brevibus triangularibus, corolla campanulato-infundibuliformi supra basin contracta, stigmatibus oblongis.

Campanula Vidaliana, *H. C. Wats., Ms. (No.* 113 *of "Plants collected in the Azores, in* 1842.")

Hab. On an insulated rock off the east coast of Flores, between Santa Cruz and Ponta Delgada, *Capt. Vidal,* R.N.

I was indebted to Capt. Vidal for the very few specimens of this remarkable *Campanula,* distributed with the other plants collected by myself in the Azores. Only fragments were obtained; and I have seen neither the root, nor the fruit more advanced than the flowering stage. Apparently the generic character is that of *Campanula,* although the leaves and branches differ widely from those of all the other species known to me, and more recall to mind some species of *Saxifraga* or *Sempervivum.* The branches are dichotomous; each fork terminating in a rosette of leaves, intermediate in texture between coriaceous and succulent, and a similar rosette is sessile between the forks. The branch is thickened where these rosettes occur, and ultimately covered with scales formed by their persistent bases. The flower-stalk shoots up from the tuft of leaves, as in species of *Sempervivum.* Several of the flower-buds are abortive, or else developed later and irregularly. Corolla white or cream-colour, shaded with pink externally.—*H. C. Watson.*

Fig. 1. Immature fruit; slightly *magnified.* (This, as well as most of the figures, is copied from a faithful drawing by Mr. Watson.) *Ed.*

TAB. DCLXXXV.

Epilobium confertifolium, *Hook. fil.*

Herbaceum glabrum, caule repente radicante ramoso, ramis divaricatis decumbentibus teretibus cum lineis duabus oppositis incanis, foliis oppositis valde approximatis subimbricatis breviter petiolatis oblongo-obovatis obtusis subcarnosis glaberrimis remote et obscure dentatis, petiolis margine incanis basi connatis subvaginantibus, pedunculis sessilibus solitariis axillaribus, floribus erectis, petalis rubris subpurpureisve ad medium bifidis, ovario glaberrimo, stylo oblique clavato, capsula lineari-elongata glaberrima.

Epilobium confertifolium, *Hook. fil. Fl. Antarct.* 1, *p.* 10.

Hab. Lord Auckland's group, and Campbell's Island: on grassy banks, and in moist places, abundant.

This little plant occupies the place in these islands that the E. *alpinum*, L. does on the European mountains. The two species are indeed so very closely allied, that we look in vain for further constant characters than the creeping, and rooting, and much branched stem, the densely crowded, broader and more obovate leaves, with almost sheathing petioles, and the deeply bifid petals. The more remarkable points of similarity, besides the general appearance, are the lines of pubescence on the stem, the sessile or shortly pedunculated ovaria (which in E. *alpinum* are however often on longer stalks), the deep colour of the petals, and the simple clavate stigma, which is here decidedly oblique and gibbous at the base. Very similar species are found on the Andes of Peru, and in Chili.—*J. D. H.*

Fig. 1. Flower, scarcely expanded. *f.* 2. Expanded blossom. *f.* 3. Petal;—*magnified.*

Tab. DCLXXIV.

TAB. DCLXXXVI.

Cardamine corymbosa, *Hook. fil.*

Hirsutula v. glabra, caulibus perbrevibus rigidis ad basin ramosis, ramis gracilibus flexuosis diffusis parce foliosis, foliis longe petiolatis pinnatisectis, foliolis 3-5 sub-petiolulatis rotundatis terminali majore lateralibus remotis sæpe minutis, floribus corymboso-fasciculatis axillaribus v. terminalibus, corymbis nunc proliferis, pedicellis brevibus demum valde elongatis, siliquis anguste linearibus in stylum brevem attenuatis, replo angusto, valvis planis, stigmate minuto.

Cardamine corymbosa. *Hook. fil. Fl. Antarct. v.* 1, *p.* 6.

Hab. Campbell's Island. On turfy ground near the sea, common.

This is a small and very distinct species of *Cardamine*, wiry and fragile in every part. The stems short, or, rather at once, after springing from the collum, divided into spreading, ascending, filiform branches, with few and small leaves; and with corymbs, or, more correctly speaking, fascicles of flowers, which at no period seem to constitute a raceme. Occasionally even the flower is solitary and axillary; generally, several rise together from the side or apex of a stem, subtended by a leaf; sometimes, a pedicel appears proliferous, running out into a stem, and bearing a fascicle or corymb and a leaf at its apex, so that the inflorescence has little the appearance of that of a Cruciferous plant. *J. D. H.*

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2.

3.

TABS. DCLXXXVII, DCLXXXVIII.

Leianthus umbellatus, *Griseb.*

Arborescens, ramulis herbaceis, foliis obovato-oblongis elongatis acutissimis basi longe attenuatis, petiolis oppositis connato-vaginantibus, pedunculis axillaribus folio brevioribus, floribus umbellatis, umbella bracteis 2-3 amplis involucrata, corollis infundibuliformi-cylindraceis ore subobliquo, staminibus stylo exsertis.

Leianthus umbellatus, *Griseb. Gen. et Sp. Gent. p.* 199.

Lisianthus umbellatus, *Sw. Fl. Ind. Occ.* 1, *p.* 350.

Hab. Jamaica. Lofty mountains of St. Jacob's, *Swartz*; summit of the Dolphin Mountain, parish of Hanover, *Dr. Macfadyen, Mr. Purdie.*

Frutex seu *Arbor* insignis, 20-pedalis. *Folia* numerosa in ramulos herbaceos, 6-uncialia ad pedalem, coriaceo-membranacea, basi in petiolum longe sensimque attenuata. *Pedunculi* solitarii, 4 unciales ad spithamæam. *Umbella* 2-3 uncias lata, 8-12-14-flora, involucrata. *Involucri foliola* 2-3 ampla, umbella longiora, ovata, acuta, unico sæpe minore. *Pedicelli* bracteolati (bracteolis parvis subulatis) breves, 2-3 lineas longi. *Calyx* parvu, tubulosus, 5-fidus. *Corolla* unciam longa, ut videtur luteo-alba, ore parum obliquo, 5-fido, lobis rotundatis, acutis, erectis. *Antheræ* exsertæ, sagittatæ, apiculatæ, margine utrinque dehiscentes. *Stigma* dilatato-clavatum.

One of the most remarkable of the *Gentianeæ*; a tree or large shrub, 20 feet high! apparently of great rarity. No one seems to have gathered it since the days of Swartz, except Dr. Macfadyen and Mr. Purdie.

Fig. 1. Flower. *f.* 2. Anther. *f.* 3. Pistil. *f.* 4. Stigma :— *magnified.*

2.
1.

TABS. DCLXXXIX, DCXC.

Conradia calycosa, *Hook.*

Fruticosa glabra, foliis oblongis serratis lævibus petiolatis basi acutis apice acuminatis subtus discoloribus, pedunculis axillaribus solitariis unifloris folio sublongioribus, laciniis calycinis subulatis longissimis corollam obliquam subcampanulatam superantibus, staminibus styloque longe exsertis, capsula elongata cylindraceo clavata sulcata.

Hab. Jamaica; Sedburgh, Manchester, *Mr. Purdie.*

This is a very fine and undescribed species of *Conradia* (Mart. not Nutt.) with large flowers, solitary on each peduncle, remarkable for the great length of the calycine segments, which much exceed the corolla, and the very protruded stamens and style. It forms a shrub, 5 to 10 feet high, according to Mr. Purdie, flowing copiously in December. Leaves 46 inches, long, firm, but rather membranaceous, glabrous, smooth to the touch, pale, and sometimes rather rusty beneath, where the pinnated veins are prominent and darker coloured, and the veinlets are reticulated. Petioles an inch or an inch and a half long. Peduncle rather stout, about as long as the leaf, but including the flower (for the calyx with the tube often measures $2\frac{1}{2}$ inches longer.) The club-shaped sulcated capsules, with the long persistent segments of the calyx (resembling the legs of some insect) have a singular appearance.

TAB. DCXCI.

Tofieldia (Isidrogalvia) sessiliflora, *Hook.*

Glabra, calyculo triphyllo ad basin perianthii, scapo elato rigido remote bracteato, floribus spicatis, sepalis lineari-lanceolatis, foliis ensiformi-linearibus acuminatis rigidis profunde striatis marginibus incrassatis pubescentibus.

Hab. Caraccas, *Linden*, April, 1842 *n.* 410; Andes of New Grenada, *Linden* (1842-3) *n.* 410.

Radix e fibris crassiusculis, rigidis. Folia lineari-ensiformia, rigida, acuminata, 5-10 uncias longa, 3-4 lineas lata, pungentia, erecta, stricta vel subfalcata, pulcherrime profunde arcte striata, margine usque ad apicem incrassata, pubescentia, basi equitantia, submembranacea. Scapus pedalis, fere sesquipedalis, basi crassiusculus, superne attenuatus, bracteatus ; bracteis lanceolatis acuminatis, remotis, superioribus magis approximatis minoribus. Spica oblongo-ovalis, obtusa, 14-16-flora. Flores approximati ut videtur lutei, majusculi, omnino sessiles, bracteis tribus ovatis acuminatis calyculum referentibus basi stipati et bractea majore sub calyculum. Sepala 6, anguste lanceolata, obtusiuscula, striata, persistentia. Stamina 6, singulo ad basin cujusque sepali. Filamenta subulata, glabra. Antheræ ovatæ. Ovarium oblongum, 3-loculare, loculis ut videtur e valvarum marginibus introflexis, marginibus seminiferis.

Nearly allied to *Tofieldia frigida* (which is surely identical with *Isidrogalvia falcata*, Ruiz and Pav. Fl. Per. 3, p. 302, f. b.) but differing specifically in the greater size, in the truly sessile flowers, and in the thickened margin of the leaves. It is probable, if we were to compare the ripened fruit of *Isidrogalvia* (R. and P.) with that of *Tofieldia*, we should find the former to be a distinct genus, as indicated by the larger, rigid, and pungent leaves, larger and coloured sepals, and general aspect. It is no doubt the representative of *Tofieldia* in the southern hemisphere.

Fig. 1. Flower and bracteas. *f.* 2. Expanded flower. *f.* 3. Pistil. *f.* 4. Section of the ovary :—*magnified.*

Tab. DCXCV.

TAB. DCXCII.

LEPTONEMA, *Hook.*

GEN. CHAR. *Sepala* magna, ovalia, erecta, concava, herbacea, obtusa, margine membranacea. *Petala* obovato-cuneata, in unguem attenuata, demum superne patentia, emarginata, eroso-serrata, calycem duplo superantia. *Stamina* 6, quorum 4 paulo longiora, calycem fere æquantia. *Filamenta* elongata, gracilia, filiformia, edentula, basi latiora. *Antheræ* ovales, paulo supra basin affixæ. *Ovarium* sessile, ovatum, plano-compressum, biloculare, *loculis* subsexovulatis, *ovulis* pendulis; *podospermis* elongatis. *Dissepimentum* integrum. *Stylus* longissimus, gracilis, filiformis, petala superans. *Stigma* capitatum. *Fructus* immaturus ut in ovario, *stylo* longissimo persistente terminatus.—Fruticulus *lignosus* Novæ Granatensis. Folia *ramulos breves terminantia, linearia, subcarnosa, integerrima, glabra; hi* ramuli *in pedunculos floriferos 4-5-unciales prolongati sunt.* Flores *racemosi, remoti, bracteati.* Bracteæ *folia simulantes.* Pedicelli *graciles, demum fere unciales, erecto-patentes.* Flores *cernui, subcylindracei, magni.* Petala *in sicco flavicantia.* Pedicelli calycesque *parce pilosi, pilis simplicibus vel apice ramosi, in glandulam seu vesiculam oblongam impositi.*

Leptonema *Lindeni.*

HAB. New Grenada, *Linden* (1842-3) *n.* 1433.

Although unacquainted with the mature fruit of this plant, I can have little hesitation in considering it a hitherto undescribed genus; in habit like none that is known to me. In my single specimen (here represented) the lower portion is thick and woody, and even knotted. Above, it divides into short branches having closely-placed leaves, and elongated into racemes of flowers which are of a cylindrical form. The large size of the calyx and corolla are very unfrequent in the natural family to which the plant belongs. The great length of the filaments of the stamens and styles, too, is remarkable. The young fruit is singularly compressed, even flattened; in that state, perhaps more resembling that of *Draba* than anything else. The name alludes to the long slender filaments and style.

Fig. 1. Flower. *f.* 2. Hairs and glands from the calyx. *f.* 3. Petal. *f.* 4. Stamens and pistil. *f.* 6, 7. Pistils. *f.* 7. Transverse section of an immature fruit. *f.* 8. Immature silicula with a valve removed. *f.* 9. Immature seed and seed-stalk:—*magnified.*

TABS. DCXCIII, DCXCIV.

Sloanea Jamaicensis, *Hook.*

Foliis (amplis) ovatis acuminatis apicem versus obscure sinuato-dentatis, pedunculis axillaribus solitariis unifloris pendulis, sepalis 4 petalisque 4 minoribus incisis extus subpubescentibus intus velutinis, capsula maxima ex apice profunde 4-valvi lignosa 4-loculari extus setis rigidis longis echinata.

Sloanea? "The large oval-leafed Sloanea or Brake-axe Tree." *P. Br. Jam. p.* 250.

Hab. St. Anne's parish, Jamaica (*P. Browne*) *Mr. W. Purdie.* Also in the districts of Manchester and Hanover, *Mr. W. Purdie.* Iron-wood of the colonists (not of Lunan.)

Arbor excelsa. Ramuli rugosi, fusci, glabri. Folia alterna, petiolata, 6-8 uncias longa, ovata, rigide submembranacea acuminata, integerrima, v. apicem versus sinuato-dentata, penninervia, reticulatim venosa, nervis venisque subtus prominentibus, utrinque glaberrima. Petioli 1-1½ unciam longi, teretes. Stipulæ parvæ, ovato-acuminatæ, valde caducæ. Pedunculi biunciales, axillares, solitarii, uniflori, penduli, medio bibracteolati, bracteis deciduis. Flos majusculus, unciam latus. Calyx profunde 4-partitus seu 4-sepalus. Sepala late ovata subanguste acuminata, coriacea, extus puberula, intus cinereo-velutina. Petala 4, cum sepalis alternantia, iis minora, ovata, subacuminata, parce incisa, sub discum hypogynum inserta, textura pubescentia calycis. Stamina numerosa, petalis breviora, pluriserialia, in toro seu disco carnoso lato elevato punctato velutino inter ovarii basin et petala sita. Filamenta brevissima, sericea. Antheræ lineares, terminales, erectæ, puberulæ, apiculatæ, biloculares, loculis apice utrinque poro oblongo dehiscentibus. Ovarium conicum, 4-loculare, sericeo-setosum. Stylus subulato-filiformis, stamina superans. Stigma acutum. Fructus: capsula magna subrotundo-tetragona, crassa, lignosa, 4-valvis, valvis ex apice fere ad basin dehiscentibus, 1-locularis, dissepimentis e centro valvarum, dorso setis longis copiosis rectis echinato. Semina 2-plura in quoque loculo, magnitudine *Amygdali* seminis, ex angulo interiore pendentia, arillo carnoso-pulposo flavescente tecta. Albumen paucum.

(*For further remarks see our next Leaf.*)

Fig. 1. Section of a portion of the flower. *f.* 2. The stamens and two of the petals removed. *f.* 3. Pistil. *f.* 4. Section of the ovary:—*nat. size.*

TABS. DCXCV, DCXCVI.

Sloanea Jamaicensis, *Hook.*
Fruit.

(For a Description and Figure of a flowering specimen, see our preceding Plate.)

I have ventured to place this fine plant in the genus *Sloanea*, as indeed hinted at by Patrick Browne, notwithstanding the presence of petals, and the anthers opening by pores at the apex, and the one-flowered peduncles. Indeed the limits of the genus seem to be very little understood. My specimens of *Sloanea dentata* exhibit anthers opening by pores, and in other respects our present plant has a very close affinity with that. Mr. Purdie speaks of it as producing one of the hardest of woods, so hard as to turn the edge of the best tempered axe, and hence its name of *Break-axe wood*, *Iron-wood*; but it is not the *Iron-wood* of Lunan, which includes two plants, the *Fagara Pterota*, and a species of *Ternstroemia*, allied to if not the same as *T. pedunculuris*. The present plant is evidently the *Sloanea?* of Patrick Browne's Nat. Hist. of Jamaica, of which he says he saw but one tree; but he was informed "it was pretty common in the mountains of St. Anne's, and esteemed one of the best and largest timbers in the wood; though so very hard that it is found a difficult matter even to cut it down, and from thence its common appellation (Brake-axe tree). The seeds are much coveted by mackaws and parrots, and the kernels are of an agreeable taste enveloped in a soft mucilage of a scarlet colour." It is singular that nothing has been heard of this tree, from the days of Patrick Browne to the present time. Mr. Purdie, however, in a recent letter from Jamaica, remarks, "I think it very unlikely that any bird should break or perforate these capsules to obtain the seeds, not only because of its extreme hardness, but from the well known instinct of the bird, rarely if ever allowing it to attack unripe fruit. I have never seen the capsules perforated. As soon as the fruits are ripe, they burst open and exhibit the delicately flavoured seeds. They then fall to the ground and appear imperishable, covering the ground for a great extent at all seasons of the year.

Fig. 1. Young fruit. *f.* 2. Mature fruit, the capsule having burst. *f.* 3. Seed, with its pulpy coat. *f.* 4. Section of ditto, showing the seed itself; *nat. size.* *f.* 5. Transverse section of the seed. *f.* 6. Vertical section of ditto. *f.* 7. Side view of the embryo:—slightly *magnified.*

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TAB. DCXCVII.

MARTENSIA ELEGANS, *Hering.*

Fronde plana delicata membranacea rosea reticulata, disco avenio, margine processibus veniformibus alatis repetitim anastomosantibus rete elegantissimum formantibus fimbriato, granulis tetrasporis in soros collectis supra frondis discum, vel plus minus sparsis in costas reticuli, "capsulis sphæricis reticulo affixis sporidia subglobosa foventibus."

Martensia elegans, *Hering, Ann. of Nat. Hist. v.* 8. *p.* 92.

Hemitrema Kraussii, *Brown, ms.—Endlicher, in Gen. Plant. Suppl. III. p.* 50.

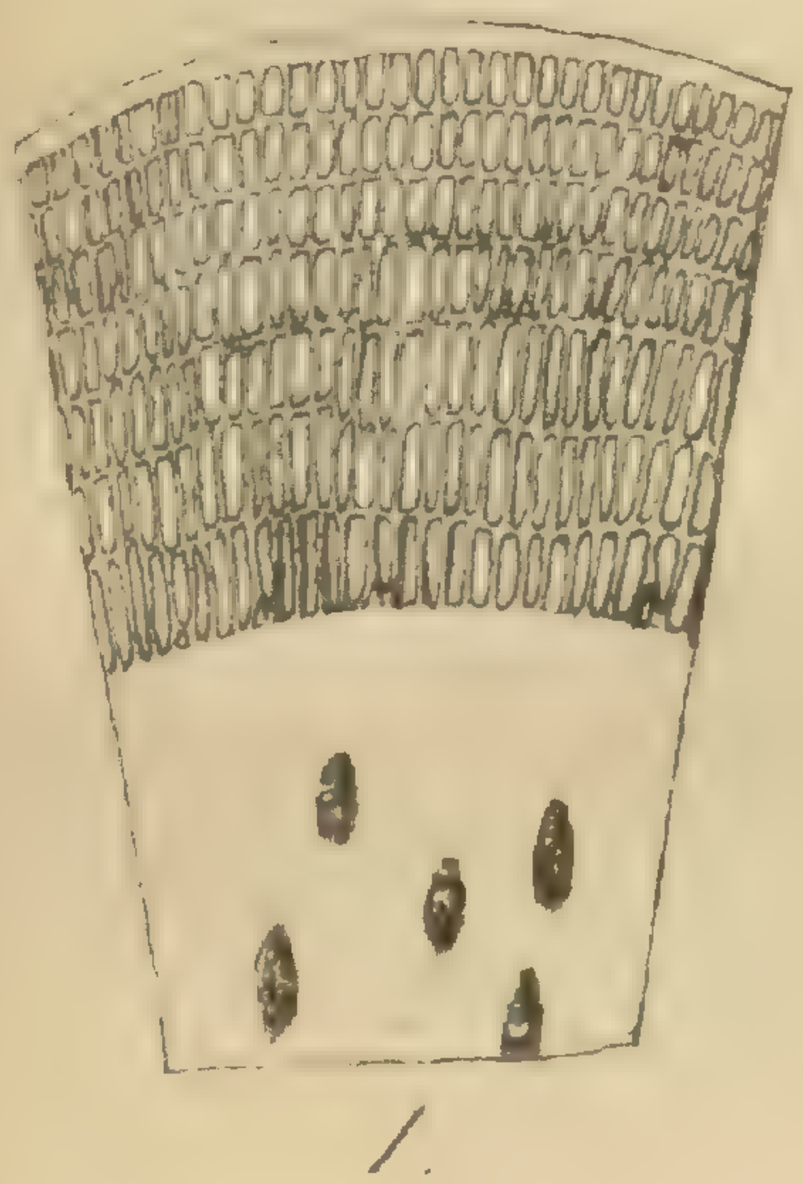
HAB. Marine rocks, Natal Point, S. Africa, *Mr. Krauss.*

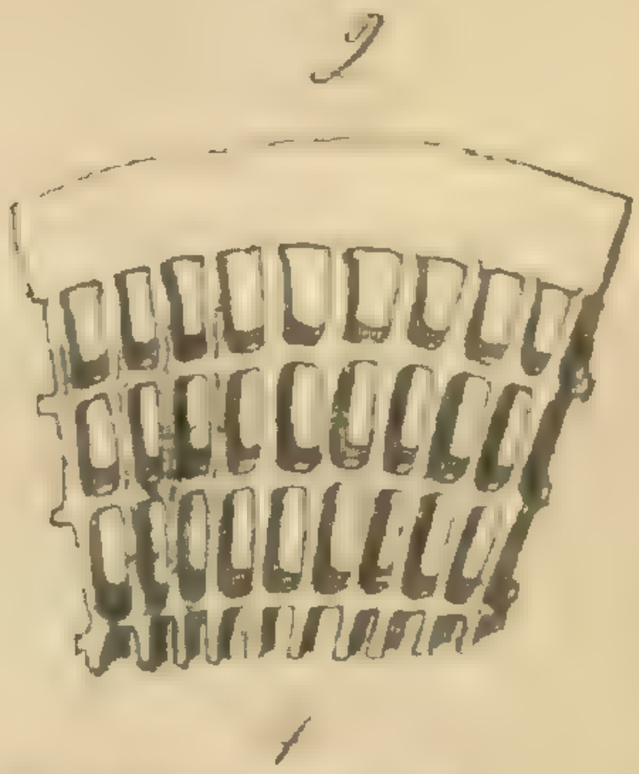
Frond 1-1½ inch high, at first flabelliform, at length ovate, very delicate, rose-coloured, distinctly reticulate bearing towards the edge sori of quaternate granules. At first the edge is perfectly even; but at a certain stage of growth linear processes are thrown off from it, which are thicker than the substance of the frond. These are furnished with a delicate wing-like border, and anastomose repeatedly with one another in such a way as to form a beautiful network consisting of more or less oblong reticulations, arranged concentrically with the border of the fronds. The edge of the net-work at length becomes lobed; but the margin is tolerably even. It forms, in consequence of the winged border of the processes, a mass very much thicker than the frond. Fructifying tetrasporous granules like those of the frond are scattered over the processes, and sometimes are collected in sori.

Without the net-work the frond and granules are precisely those of *Nitophyllum*. I have not had an opportunity of observing microscopically the capsuliferous individuals. *M. J. Berkeley.*

(In the net-work margin of this most beautiful *Alga*, Mr. Fitch, who made the accompanying drawing, observes that the net-work is double, and the upper and under layer are united by a transverse tissue, and it is in this *transverse* tissue that the sporules, and not in that on either surface are placed. Specimens of this plant were distributed with Mr. Browne's appropriate and earlier name of *Hemitrema*; and we wish we could have joined with Endlicher in adopting it, consistently with fairness to Mr. Hering. But it was first published under the name we have adopted in the Annals of Natural History.—W. J. H.)

Fig 1. Portion of the plant. *f.* 2. Ditto of the reticulated margin. *f.* 3. Smaller portion of *f.* 2, showing the situation of the fructifications. *f.* 4. Portion of the disk of the plant with its fructifications. *f.* 5. sporules:—all more or less *magnified.*





TABS. DCXCVIII, DCXCIX.

Pachystigma, *Hook. Gen. Nov.*

Gen. Char. *Calyx* subtriphyllus, *sepalis* concavis inæqualibus æstivatione imbricatis, interiore majore petaloideo. *Petala* 4, libera, subrotunda, concava, alba, impunctata; æstivatione imbricativa. *Stamina* plurima, sub 30, libera, gynophoro rugoso carnoso, majusculo, breviter stipitato, subbiseriatim inserta. *Filamenta* erecta, brevia, lato-subulata. *Antheræ* ovales, biloculares, antice longitudinaliter dehiscentes. *Ovarium* globosum gynophoro impositum, 8-sulcatum, velutinum, 8-loculare, *loculis* biovulatis, *stigmate* magno carnoso irregulariter lobato deciduo coronatum. *Capsula* demum e cocculis 8 (quibusdam abortientibus), stellatim dispositis, basi coalitis, abortu plerumque monospermis: *epicarpio* sicco, subrugoso, dorso carina lata instructo; *endocarpio* cartilagineo, demum soluto. *Semen* oblique ovatum. *Podospermum* majusculum, carnosum, album.—Frutex *seu* arbor *humilis* Jamaicensis, *valde ramosus; ramulis cortice lævi, viridi-fusco tectis.* Folia *alterna, exstipulata, trifoliolata,* foliolis *ovatis breviter acuminatis, integerrimis seu obsolete serratis, copiose pellucido-punctatis, petiolulatis, in petiolum articulatis, penninerviis;* pedunculis *axillaribus folio sublongioribus, parce subtrichotome ramosis,* pedicellis *basi bracteatis,* bracteis *lanceolatis petiolatis foliaceis.* Flores *majusculi, ut videtur, albi, extus puberuli, fragrantes.* Fructus *maturus sesquiunciam diametro.*

Pachystigma *pteleoides.*

Hab. On the mountains of Santa Cruz, Jamaica, *Mr. Purdie.*

This is another remarkable new plant of Jamaica, for the discovery of which, in 1844, we are indebted to Mr. Purdie, Botanical Collector for the Royal Botanical Gardens of Kew. I am quite unable to refer it to any described Genus. In its unequal and imbricated sepals, and the general appearance of the flowers, it has an affinity with *Aurantiaceæ*; but the fruit is truly that of *Diosmeæ* among *Rutaceæ*, from all the described genera of which this is readily known by its floral coverings, its broad gynophore, its numerous stamens, and large irregularly lobed stigma.

Fig. 1. Petal. *f.* 2. Stamen. *f.* 3. Pistil and gynophore. *f.* 4. The same with the short stipes cut through. *f.* 5. Section of the ovary. *f.* 6. Seed:—*magnified.*

TAB. DCC.

Euphorbia alata, *Hook.*

Suffruticosa, caulibus erectis di-trichotomis articulatis ramisque gracilibus compresso-planis utrinque alatis glaucis, articulis linearibus elongatis, foliis 2 raris terminalibus ovali-rotundatis deciduis, floribus solitariis utrinque ad genicula, plerumque 3 terminalibus minutis breviter pedunculatis, pedunculis bibracteatis, bracteis in axillo rudimentum floris gerentibus, involucri glandulis 5 squamisque 5 fimbriatis iis alternantibus.

Hab. Rocky woody place above Christiana, Manchester, Jamaica, growing with the *Lagetta lintearia*, or Lace-Bark Tree, *Mr. Purdie.*

Few plants, as is well known, can be more proteous in appearance than the various species of *Euphorbia;* but the most unusual forms are chiefly confined to Africa, the tropical parts of the new world producing but few species; though *there* is found the present very remarkable one, which but for its flowers might rather be taken for some flat-stemmed articulated *Viscum*, or an *Epiphyllum*, among *Cacteæ.* Our specimen is about a foot high. From a fibrous, but ligneous root, arises a short cylindrical stem, woody at the base, soon becoming herbaceous, glaucous-green, firm and rigid, branched and jointed; the branches and articulations slender, compressed, two-edged with a wing-like border. Two small, shortly petiolated leaves, are seen at the apices of some of the ultimate articulations; but they are quickly deciduous, and the whole plant is very fragile at the joints. Flowers sometimes solitary at the joint, usually three appear together at the apex, and from between the two leaves; they are small, purplish-brown. The species is probably diœcious.

Fig. 1. Apex of a flowering branch. *f.* 2. Involucre with flowers. *f.* 3. The same laid open, showing the fimbriated scales, male flowers, and a solitary imperfect female flower in the centre. *f.* 4. Male flowers removed from the involucre. *f.* 5. Abortive female flower from ditto:—*magnified.*

ICONES PLANTARUM;

OR

FIGURES,

WITH

BRIEF DESCRIPTIVE CHARACTERS AND REMARKS,

OF

NEW OR RARE PLANTS,

SELECTED FROM THE AUTHOR'S HERBARIUM.

By SIR WILLIAM JACKSON HOOKER, K.H.,

LL.D., F.R.A, AND F.L.S.

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MEMBER OF THE IMP. ACAD. NAT. CUR., ETC., ETC., ETC.

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DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

VOL. IV. NEW SERIES,

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INDEX

TO THE

PLANTS CONTAINED IN VOLUME IV.,

(OR VOL. VIII. OF THE ENTIRE WORK;)

ARRANGED ACCORDING TO THEIR NATURAL ORDERS.

	TAB.
RANUNCULACEÆ.	
Ranunculus Peruvianus, *Pers.* .	745
PAPAVERACEÆ.	
Meconopsis heterophylla, *Benth.* .	732
CRUCIFERÆ.	
Sinapidendron gracile, *Webb*, .	751
——— Vogelii, *Webb*, .	752
ANONACEÆ.	
Uvaria? Vogelii, *Hook. fil.* . .	767
MENISPERMEÆ.	
Cocculus? macranthus, *Hook. fil.* .	759
FLACOURTIANEÆ.	
Microdesmis puberula, *Hook. fil.* .	758
CAPPARIDEÆ.	
Ritchiea erecta, *Hook. fil.* .	769-70
MALVACEÆ.	
Hibiscus (Abelmoschus) tulipæflorus, *Hook.* . .	707-8
TILIACEÆ.	
Melhania Leprieurii, *Webb*, .	753-5
Glyphæa grewioides, *Hook. fil.* .	760
HYPERICINEÆ.	
Psorospermum tenuifolium, *Hook. fil.*	771
IXIONANTHEÆ.	
Ochtocosmus Africanus, *Hook. fil.*	773
LINEÆ.	
Hugonia Planchoni, *Hook. fil.* .	777
SAUVAGESIEÆ.	
Euthemis leucocarpa, *Jack*, .	711
MALPIGHIACEÆ.	
Acridocarpus corymbosus, *Hook. fil.*	794
SAPINDACEÆ.	
Schmidelia monophylla, *Hook. fil.*	775
CHAILLETIACEÆ.	
Chailletia floribunda, *Planch.* .	792
OCHNACEÆ.	
Gomphia Sumatrana, *Jack*, . .	712
Hostmannia elvasioides, *Planch.*	709
TEREBINTHACEÆ.	
Philagonia fraxinifolia, *Hook.* .	710

TAB.

RUTACEÆ.

Boronia rhomboidea, *Hook.* . 722
Phebalium grandiflorum, *Hook.* . 724
——— squamuligerum, *Hook.* 727

MELIANTHEÆ.

Natalia paullinioides, *Planch.* . 780

LEGUMINOSÆ.

Lotus purpureus, *Webb*, . . 757
—— Brunneri, *Webb*, . . 754
Phaca Vogelii, *Webb*, . . . 763
Milletia macrophylla, *Benth.* 788-9
Leucomphalos capparideus, *Benth.* 784
Afzelia bracteata, *Vogel*, . . 790-1

RUBIACEÆ.

Uncaria Africana, *Don*, . . 781
Nauclea platanocarpa, *Hook. fil.* . 787
Oxyanthus formosus, *Hook. fil.* 785-6
Gardenia Vogelii, *Hook. fil.* . 782-3

LORANTHACEÆ.

Loranthus macranthus, *Hook.* 743-4

UMBELLIFERÆ.

Xanthosia ciliata, *Hook.* . . 726

ARALIACEÆ.

Aralia Polaris, *Hombr. et Jacquin.* 747

ROSACEÆ.

Rubus pulcherrimus, *Hook.* . 729-30
—— Lobbianus, *Hook.* . 741-2

NAPOLEONEÆ.

Napoleona Vogelii, *Hook. et Planch.* . . . 799-800

ILLECEBREÆ.

Paronychia illecebroides, *Webb*, . 756

COMPOSITÆ.

Baccharis (Disticha) ferruginea, *Pers.* 750
Phagnalon melanoleucum, *Webb*, . 764

TAB.

Rhabdotheca picridioides, *Webb*, . 766
Sonchus Daltoni, *Webb*, . . 765

VACCINIACEÆ.

Vaccinium muscicola, *Hook.* . 717
——— Javanicum, *Hook.* . 740

LOBELIACEÆ.

Siphocampylus giganteus, *Cav.* . 716

CAMPANULACEÆ.

Campanula (Medium) Jacobæa, *Chr. Sur.* 762

LOGANIACEÆ.

Usteria Guineensis, *Willd.* . . 795

Anthocleista Vogelii, *Planch.* 793-4

CYRTANDRACEÆ.

Agalmyla staminea, *Bl.* . 733-4
Cyrtandra pendula, *Bl.* . 735-6

ASCLEPIADEÆ.

Sarcostemma Daltoni, *Dcne.* . 768

GENTIANEÆ.

Villarsia involucrata, *Hook.* . . 735

SAPOTEÆ.

Sapota marginata, *Dcne.* . . 761

SCROPHULARINEÆ.

Campylanthus Benthami, *Webb*, . 726

CONVOLVULACEÆ.

Codonanthus? alternifolia, *Planch.* 796

BORAGINEÆ.

Echium stenosiphon, *Webb*, . 772

ACANTHACEÆ.

Aphelandra? carduifolia, *Hook.* . 718

SOLANEÆ.

Lycium Quitense, *Hook.* . . 723

OLACINEÆ.

Apodytes Beninensis, *Hook. fil.* . 728

	TAB.
THYMELEÆ.	
Dicranolepis disticha, *Planch.*	798
EUPHORBIACEÆ ?	
Cleistanthus polystachius, *Hook. fil.*	779
Amanoa bracteosa, *Planch.*	797
JUNCAGINEÆ.	
Triglochin Calcitrapa, *Hook.*	731
——— centrocarpum, *Hook.*	728
JUNCEÆ.	
Juncus andicola, *Hook.*	714
MUSCI.	
Phascum exiguum (B.), *Hook. et Wils.*	737
——— cristatum (A.), *Hook. et Wils.*	737
Schistidium pulchellum (B.), *Hook. et Wils.*	738
Weissia pallens (A.), *Hook. et Wils.*	739
Fabronia tomentosa (C.), *Hook. et Wils.*	739
Orthodontium sulcatum, *Hook. et Wils.*	739
Macromitrion brachiatum, *Hook et Wils.*	746
Leptotheca speciosa, *Hook. et Wils.*	748
Hookeria fissidentoides *Hook. et Wils.*	746
FILICES.	
Acrostichum (Elaphoglossum) cardiophyllum, *Hook.*	715
Polypodium (Marginaria) punctulatum	720
——— subcrenatum, *Hook.*	719
——— (Eupolypodium) onustum, *Hook.*	719
——— chrysolepis, *Hook.*	721
Jamesonia cinnamomea, *Kze.*	713
Trichomanes Smithii	704
——— polyanthos, *Hook.*	703
——— giganteum, *Bory,*	702
——— elongatum, *A. Cunn.*	701
——— melanorhizon, *Hook.*	705
Hemitelia Lindeni, *Hook.*	706

INDEX

TO THE

PLANTS CONTAINED IN VOLUME IV.,

(OR VOL. VIII. OF THE ENTIRE WORK;)

ALPHABETICALLY ARRANGED.

	TAB.
Acridocarpus corymbosus, *Hook. fil. mit.*	774
Acrostichum (Elaphoglossum) cardiophyllum, *Hook.*	715
Afzelia bracteata, *Vogel*,	790-1
Agalmyla staminea, *Bl.*	733-4
Amanoa bracteosa, *Planch.*	797
Anthocleista Vogelii, *Planch.*	793-4
Aphelandra? carduifolia, *Hook.*	718
Apodytes Beninensis, *Hook. fil. ms.*	778
Aralia Polaris, *Hombr. et Jacquin.*	747
Baccharis (Disticha) ferruginea, *Pers.*	750
Boronia rhomboidea, *Hook.*	722
Campanula (Medium) Jacobæa, *Chr. Sm.*	772
Campylanthus Benthami, *Webb*,	776
Chailletia floribunda, *Planch.*	792
Cleistanthus polystachyus, *Hook. fil.*	779
Cocculus? macranthus, *Hook. fil.*	759
Codonanthus? alternifolia, *Planch.*	796
Cyrtandra pendula, *Bl.*	735-6
Dicranolepis disticha, *Planch.*	798
Echium stenosiphon, *Webb*,	772
Euthemis leucocarpa, *Jack*,	711
Fabronia tomentosa (C.), *Hook. et Wils.*	739
Gardenia Vogelii, *Hook. fil.*	782-3
Glyphæa grewioides, *Hook. fil.*	760
Gomphia Sumatrana, *Jack*,	712
Hemitelia Lindeni, *Hook.*	706
Hibiscus (Abelmoschus) tulipæflorus, *Hook.*	707-8
Hookeria fissidentoides (A.), *Hook. et Wils.*	746
Hostmannia elvasioides, *Planch.*	709
Hugonia Planchoni, *Hook. fil.*	777
Jamesonia cinnamomea, *Kze.*	713
Juncus andicola, *Hook.*	714
Leptotheca speciosa, *Hook. et Wils.*	748
Leucomphalos capparideus, *Benth.*	784
Loranthus macranthus, *Hook.*	743-4
Lotus Brunneri, *Webb*,	754
Lotus purpureus, *Webb*,	757
Lycium Quitense, *Hook.*	723
Macromitrion brachiatum, *Hook. et Wils.*	746
Meconopsis heterophylla, *Benth.*	732
Melhania Leprieurii, *Webb*,	753
———————, *Webb*,	755
Microdesmis puberula, *Hook. fil.*	758
Milletia macrophylla, *Benth.*	788-9
Napoleona Vogelii, *Hook. et Planch.*	799-800
Natalia paullinioides, *Planch.*	780

TAB. DCCI.

Trichomanes elongatum. *A. Cunn.*

Cæspitosum erectum rigidum atro-viride, frondibus ovatis bi-pinnatis, pinnulis arcte approximatis imbricatis oblongo-cuneatis inciso-pinnatifidis, segmentis brevibus acutis sæpe bifidis, involucris copiosissimis supra-axillaribus in pinnularum sinubus cylindraceis liberis basi attenuatis, ore integro vix patente subbilabiato, receptaculis exsertis longissimis curvatis, stipite rachique teretibus ubique glabris.

Trichomanes elongatum. *A. Cunn. Nov. Zel. in Hook. Comp. Bot. Mag.* 2, *p.* 368; *Hook. Sp. Fil.* 1, *p.* 134.

Hab. New Zealand, Northern Island. *A. Cunningham, Colenso, J. D. Hooker, and others.*

Perhaps it is not correct to speak of this as an erect-growing Fern. The frond seems to be decurved, probably pendent, from the face of rocks, thus presenting to view the under-side, which is most copiously studded with fructifications, and the remarkably elongated (and also curved) receptacles, whence the name *Tr. elongatum* was given to it by its original discoverer. It evidently belongs to the same group as *Tr. rigidum*, Sw.; and though truly distinct, the two plants are more easily discriminated by the eye than by words.

Fig. 1. Stipites, to show their aggregate or tufted mode of growth. *f.* 2. Frond. *f.* 3. Portion of a fertile pinda:—*magnified.*

1.
2.
3.

TAB. DCCII.

Trichomanes giganteum. *Bory et Willd.*

Cæspitosum ? erectum elongatum, frondibus late obovato-lanceolatis bipinnatis, pinnis primariis distantibus lanceolatis acuminatis elongatis, secundariis (pinnulisve) ovatis, infimis superioribus rachi appressis subtripinnatifidis, segmentis linearibus obtusis, involucris supra-axillaribus subcylindraceis liberis paululum alatis, ore integro subpatente, rachi terete supra canaliculata immarginata stipiteque terete pilosis, pilis mollibus sparsis fuscis.

Trichomanes giganteum. *Bory in Willd. v.* 5, *p.* 514; *Hook. Sp. Fil.* 1, *p.* 137.

T. Mauritianum. *Flugge mss.* (*Willd.*)

Hab. Isle of Bourbon. *Bory, Carmichael.*

My specimen of this is from Captain Carmichael; and it wants the lower part of the stipes, so that I am ignorant of the nature of its root. The frond is fourteen inches long (much larger than Willdenow describes it), dark brown, flaccid, truly bipinnate; the ultimate segments and involucres as in *T. strictum*, Menz. (Hook. and Grev. Ic. Fil. t. 122), but the former are more compoundly divided and more flaccid.

Fig. 1. Upper portion of a frond. *f.* 2. Apex of the same frond; *nat. size.* *f.* 3. Segment with involucre:—*magnified.*

2.
1.
3.

TAB. DCCIII.

Trichomanes polyanthos. *Hook.*

Cæspitosum elatum rigidum, frondibus oblongis v. ovato-lanceolatis attenuatis inferne pinnatis, pinnis lanceolatis horizontaliter patentibus subfalcato-decurvis bi-tripinnatifidis, segmentis lineari-obtusis, involucris supra-axillaribus copiosis magnis liberis campanulatis superne præcipue tenuissime membranaceis, ore patente, receptaculis brevissimis omnino inclusis, stipite rachique tenui-marginata subrobustis scabris subhispidisque.

Trichomanes polyanthos. *Hook. Sp. Fil.* 1, *p.* 138.

Hymenophyllum polyanthos. *Hook. in Nightingale's Oceanic Sketches, App. p.* 132 (*not Sw.*)

Hab. Pacific Islands. *Sir Thomas Nightingale.*

Stipes 3-4 or 5 inches long, very stout, relatively to other species of the genus, as is also the rachis. Frond 1 foot high, 4-5 inches broad, very remarkable in the nature of its involucres, which are quite unlike any others, large, exactly campanulate, glossy, membranaceous, especially the upper pellucid half, in texture and form more resembling those of *Hymenophyllum* than *Trichomanes*, but they cannot be said to be 2-valved. The receptacles are also entirely, and in every instance, included within the involucres.

Fig. 1. Lower portion of a frond ; *nat. size.* *f.* 2. Fertile segments. *f.* 3. Involucre :—*magnified.*

3.
2.

TAB. DCCIV.

Trichomanes Smithii.

Cæspitosum erectum subflaccidum, frondibus gracillimis lanceolatis pinnatis, pinnis inferioribus remotis brevibus superioribus approximatis omnibus subpalmato-multifidis, segmentis elongatis remotis patentibus ultimis magis elongatis, cellulis magnis lineari-elongatis transversis in lineas latas seu maculas elongatas longitudinales obliquas dispositis, ad margines solummodo cellulis subquadratis, involucris supra-axillaribus in laciniis brevibus terminalibus anguste urceolatis coriaceis brunneis inferne alatis, ore patente, stipite filiformi subhirsuto demum glabro.

Trichomanes Smithii. *Hook. Sp. Fil.* 1, *p.* 138.

Trichomanes angustatum. *J. Sm. En. Fil. Philipp. in Hook. Journ. Bot. v.* 3, *p.* 417 (*not Carm*).

Abrodictyum Cumingii. *Presl, Hymenoph. p.* 20, *tab.* 7.

Hab. Philippine Islands. *Cuming, n.* 208 *and* 358.

Stipes slender, dark-brown or black, 1-3 inches high, sometimes slightly crisped. Fronds scarcely a span long, extremely delicate; lower pinnæ gradually becoming smaller, remote, bearing however sori, with a few short narrow segments, divided from the very base, and spreading; upper ones much larger, more crowded, the segments also rather broader and more elongated, especially the ultimate ones. The cellular texture of this is quite peculiar, so far as I know, among the *Hymenophyllaceæ*, and is best understood by our magnified figures. It is so remarkable that Presl has therefrom constituted a new genus, *Abrodictyum*.

Fig. 1. Plant; *nat. size.* *f.* 2. Fertile segment; *magnified.* *f.* 3. Portion of the same, more highly *magnified.*

1.
2.
3.

TAB. DCCV.

Trichomanes melanorhizon. *Hook.*

Caudice repente radicibusque ramosis numerosis densissime nigro-tomentosis, frondibus brevibus ovatis subsessilibus pinnatis, pinnis bipinnatifidis, segmentis anguste linearibus acutis glabris, involucris in axillis segmentorum superiorum urceolato-cylindraceis subimmersis, ore bilabiato, labiis semiorbicularibus, receptaculo longe exserto.

Trichomanes melanorhizon. *Hook. Sp. Fil.* 1, *p.* 140.

T. bilingue. *J. Sm. En. Fil. Philipp. in Hook. Bot. Journ. v.* 3, *p.* 417. (*not Hook.*)

Hab. Leyte, Philippine Islands. *Cuming, n.* 316.

Caudex and the short but copious, branching, fibrous roots quite velvety with black woolly hairs. Stipes scarcely $\frac{1}{2}$ an inch long. Fronds 3 inches. Pinnæ rather distant, sometimes opposite, very slightly decurrent. Rachis terete. Segments narrow. Involucres confined to three or four of the ultimate segments; the mouth, with 2 rather distinct lips, very obtuse, but otherwise somewhat resembling those of *T. Filicula*, Bory (T. bilabiatum, *Nees*), from which however in other respects the plant is evidently different.

Fig. 1. Plant; *nat. size.* *f.* 2. Portion of a fertile pinna:—*magnified.*

TAB. DCCVI.

Hemitelia Lindeni. *Hook.*

Inermis, frondibus pinnatis, pinnis elongatis ensiformibus acuminatis basi oblique cuneatis sessilibus marginibus pinnatifido-lobatis lobis triangularibus acutis, soris pluriserialibus seu inordinatim dispositis marginem versus totam longitudinem pinnarum fere occupantibus, venulis omnibus liberis.

Hab. Caraccas. *Linden, n.* 663.

Since the publication of the genus *Hemitelia*, in our "Species Filicum," the present one has come to our knowledge in a late packet of Mr. Linden's Caraccas plants. Its nearest affinity is assuredly with *H. speciosa*, Kaulf. (Cyathea, *H. B. K.*) and of our Sp. Fil. p. 28, t. 13, B.; but it will be at once recognized as distinct from it by the deeply-lobed, almost pinnatifid, margins of the pinnæ, and by the different appearance of the fructifications. In *H. speciosa*, as seen in the figure just quoted, the sori form an almost continued line at a slight distance from the crenato-sinuated margin; here they constitute a broad band, occupying almost one half of the portion between the margin and the costa.

Fig. 1. Portion of a frond; *nat. size.* *f.* 2. Portion of a pinna. *f.* 3. Perfect sorus. *f.* 4. Sorus with involucre, the capsules being removed:—*magnified.*

TABS. DCCVII, DCCVIII.

Hibiscus (Abelmoscus) tulipæflorus. *Hook.*

Arboreus, ramis pubescentibus, foliis amplis profunde cordatis angulato-5-lobis subseptemnerviis, stipulis amplis rotundatis deciduis, pedunculis solitariis axillaribus unifloris petioli longitudine, involucri 7-8-phylli foliolis ovatis patentibus undulatis, calyce profunde 5-lobo lobis ovatis acutis 3-nerviis erectis, flore specioso, petalis obovato-rotundatis striatis sericeo-pubescentibus, staminibus in tubum valde elongatum congestis, stigmate 5-lobo lobis globosis velutinis.

Hab. Island of Dominica, West Indies. *Dr. Imray, n.* 251.

This is one of the finest species of *Hibiscus* that has come under my observation; nor have I ever seen it except in the collections of my friend Dr. Imray from Dominica. It is remarkable in the large size of the leaves and stipules and flowers, which latter are solitary on long and thickened, very downy peduncles. The involucre consists of 7-8 nearly ovate, spreading, downy, waved leaflets. The calyx is almost campanulate, deeply 5-lobed, almost 5-partite; the lobes ovate, acute, 3-nerved. Petals large, spreading, rose-colour. Column of stamens exceedingly long, tubular. Style a little longer than the staminal tube, terminated by five obtuse, rounded, velvety lobes.

TAB. DCCIX.

Hostmannia elvasioides. *Planch.*

Char. Gen. *Calyx* 3- sæpius 4-phyllus, foliolis coloratis, concavis, æstivatione imbricatis, post anthesin reflexis, persistentibus. *Petala* 4-6 (in eodem specim.) anguste obovata, sepalis paulo longiora. *Stamina* 18-22, hypogyna; *filamentis* persistentibus, *antheris* apice biporosis, caducis. *Ovarium* simplex (non gynobasicum!) biloculare! *Ovulum* in loculo quoque unicum, anatropum, resupinato-suspensum (ut in *Euonymis* quibusdam). *Stylus* terminalis, simplex, apice brevissime bidentatus. *Fructus* ....—Frutex? *glaberrimus;* foliis *alternis, petiolatis, ellipticis, acuminatis, margine revoluto, integerrimis, chartaceis, nitidis, venulis tranversis pulchre striatis;* stipulis *in unicam intra axillarem bidentatam coalitis; paniculis ramos foliatos terminantibus;* floribus *pedicellatis, aureis;* bracteolis *scariosis acutissimis paniculæ ramos et pedicellos stipantibus.*

Hostmannia *elvasioides, Planch.*

Hab. Prope Surinam leg. *Dr. Hostmann,* cui genus merito dicatum.

The genus I have now described is remarkable for combining in itself alone all the characters which appertain in detail to the other genera of the family. In habit, inflorescence, and the ovary not gynobasic, it resembles *Elvasia,* and like it has the mode of growth of *Gomphia;* while the variable number of floral parts, the indefinite stamina, the persistent nature of the filaments, and the precocious fall of the anthers, are points in common with the true *Ochnæ.* Lastly, one character is peculiar to this genus among the *Ochnaceæ,* the 2-celled ovary, in which the ovules appear to be suspended, though they are in fact normally ascending ovules, which, finding no space for development except towards the base of the cell, assume the resupinate position first noticed by Mr. Robert Brown among the ovules of certain *Euonymi,* and which I have myself remarked in the *Laurus nobilis.* In these different instances the raphe of the ovule, instead of looking towards the placenta, as usual in monospermous cells, is on the contrary turned in an inverse direction. If we imagine these ovules set up again, they will be in their normal position, with the raphe facing the placenta. And what we see might have been the case with the ovary of *Hostmannia,* is what nature has realized in the gynobasic ovaries of *Ochna* and *Gomphia,* where the ovules are permitted to assume an ascending posture. *J. E. Planchon.*

Fig. 1. Flower. *f.* 2. Stamen. *f.* 3. Pistil. *f.* 4. Vertical section of the ovary. *f.* 5. Transverse section of ditto:—*magnified.*

TAB. DCCX.

PHILAGONIA FRAXINIFOLIA. *Hook.*

Dioica, foliis impari-pinnatis glabris, foliolis elliptico-oblongis acuminatis subserratis basi obliquis lateralibus subsessilibus terminali sublonge petiolato, paniculis cymosis pubescentibus axillaribus terminalibusque folio brevioribus, floribus tetrameris (nunc pentameris), petalis intus sericeis.

Tetradium ? fraxinifolium. *Wall. in Herb. Hook.* 1821.

Rhus fraxinifolium ? *Don, Prodr. Fl. Nep. p.* 248.

HAB. Nepal. *Dr. Wallich,* 1821.

My specimens of this plant are but imperfect; and I refrain from making any observations on the genus further than that the plant seems perfectly to accord with *Philagonia* of Blume, except in having the flowers sometimes pentamerous. It may be the *Rhus* above quoted of the late Mr. Don, though assuredly the style and stigma do not correspond with that genus.

Fig. 1. Female flower. *f.* 2. Ovary, cut through transversely:—*magnified.*

TAB. DCCXI.

Euthemis leucocarpa. *Jack.*

Char. Gen. *Calyx* 5-phyllus, foliolis ciliatis, æstiv. quincunciali. *Petala* 5, hypogyna, foliolis calycinis alterna, æstivatione convoluta, sub anthesi patentia. *Stamina* 5, petalis alterna, rarius filamentis sterilibus totidem interjectis (teste Jack). *Antheræ* sessiles, basifixæ, subtetragonæ, biloculares, apice attenuato poro unico apertæ. *Ovarium* oblongum brevissime stipitatum, stylo filiformi persistente superatum, quinqueloculare, marginibus carpellorum introflexis, versus axim fructus contiguis, non coadunatis. *Ovula* in loculo quoque 1-2 anatropa, juxta angulum internum lateraliter septis inserta, suspensa. *Bacca* farinoso-pulposa, pentapyrena; pyrenis fibrosis, monospermis. *Semina* inversa, albuminosa, embryone fere longitudine seminis; radicula supera, cotyledonibus longiore.—Frutices *Indici;* foliis *alternis, pulcherrime striato-venulosis,* petiolo *dilatato semi-amplexicauli;* stipulis *lateralibus ciliatis, caducis;* racemis *simplicibus vel basi ramosis, terminalibus, demum rami evolutione oppositifoliis;* floribus *numerosis, roseo-albis, pedicellis plerumque geminatis, basi bractea bracteolisque duabus suffultis.*—*Species* 2, *in sylvis* Singaporensibus, Insula Penang et penins. Malaccens. *observatæ.*

Euthemis *leucocarpa;* foliis lanceolatis pulchre spinuloso-serratis, racemis basi ramosis, baccis niveis globosis.

Euthemis leucocarpa. *Jack, in Hook. Bot. Misc. v.* 2, *p.* 69.

Hab. Singapore (*W. Jack.*) et Mont. Ophir penins. Malaccensis, *Lobb.* in Herb. Hook.

No analogy can be more striking than that which exists between the charming shrubs which compose the group of *Sauvagesieæ* and the present beautiful genus. The alternate, firm, shining, ciliated or cartilaginous-serrated foliage, petioles dilated at the base and accompanied by hairy stipules, corymbs of flowers which become lateral by the development of the branches, sepals generally coloured and ciliated, petals twisted in æstivation, tetragonous and almost sessile anthers nearly or quite sessile and opening by a terminal pore, a shortly stipitate ovary surmounted with a filiform persistent style, anatropous suspended ovules, perispermous seeds having a straight embryo in the axis; all these are characters possessed in common by *Euthemis* and *Luxemburgia.* If the stamens in the latter genus are indefinite and collected in a single mass, if the cells are incomplete towards the upper part and only to the number of three, finally, if the fruit is capsular and many-seeded, the first of these characters is a deviation from symmetry, of which there is no trace in *Sauvagesieæ. Euthemis,* with its definite stamens symmetrically arranged, occasionally presenting a few sterile filaments, forms the intermediate passage from the true *Sauvagesieæ* to the slightly abnormal genus *Luxemburgia.*—*J. E. Planchon.*

Tab. dccxi. Branch, from which the stipules have fallen. *Fig.* 1. Part of a leaf. *f.* 2. Flower. *f.* 3. The same, laid open. *f.* 4. Ovary:—all *magnified.*

TAB. DCCXII.

Gomphia Sumatrana. *Jack.*

Glaberrima, foliis obovato-lanceolatis chartaceo-membranaceis nitidissimis, ab apice infra medium denticulatis, venulis prominulis utrinque in nervos 2 conspicuos margini folii parallelos confluentibus, stipulis intrapetiolaribus deciduis, paniculis terminalibus, alabastris ovatis.

Gomphia Sumatrana. *Jack, Malay. Pl. in Hook. Bot. Misc. v. 2, p. 77* (*non Wall. cat. n.* 2803 *cujus spec. in Herb. Hook. ad* Gomph. angustifolium *Vahl, referendum videtur*).

Hab. In Insul. Sumatra, *Jack*, et in Herb. Hook.

The elegant plant here figured approaches very closely the *Gomphia angustifolia*, Vahl., to which Messrs. Wight and Arnott refer, as mere synonyms, the *G. Malabarica*, and *G. Zeylanica*, of De Candolle, and even the *Walpera* of Gærtner. A careful comparison of the Malayan species with the *G. angustifolia* of Ceylon, removes however all doubt from my mind of their specific distinctness. The leaves of the former are sufficient to distinguish it; they are broad, and both firm and delicate, and the transverse veinlets which mark their glossy surface run together on each side in a line parallel to the margins, and very clearly defined. The foliage in *Gomphia angustifolia* is much smaller, closer set on the branches, more coriaceous, and the little transverse veins are delicate, numerous, and with hardly perceptible marginal nerves. In the Sumatran species, the panicle is elongated, and the buds ovoid; in the other, the panicle is much contracted and the buds nearly globular. These distinctions, though appearing almost too slight to be named in a specific character, are yet very evident in the specimen itself; and they seem to me adequate to mark the two species of this large and noble genus, and which banished, so to speak, from their native country, figure in the Flora of India, together with several individuals of the true genus *Ochna*.—*J. E. Planchon.*

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Stamen. *f.* 4. Pistil :— *magnified.*

2.
3.
4.
1.

TAB. DCCXIII.

JAMESONIA CINNAMOMEA. *Kze.*

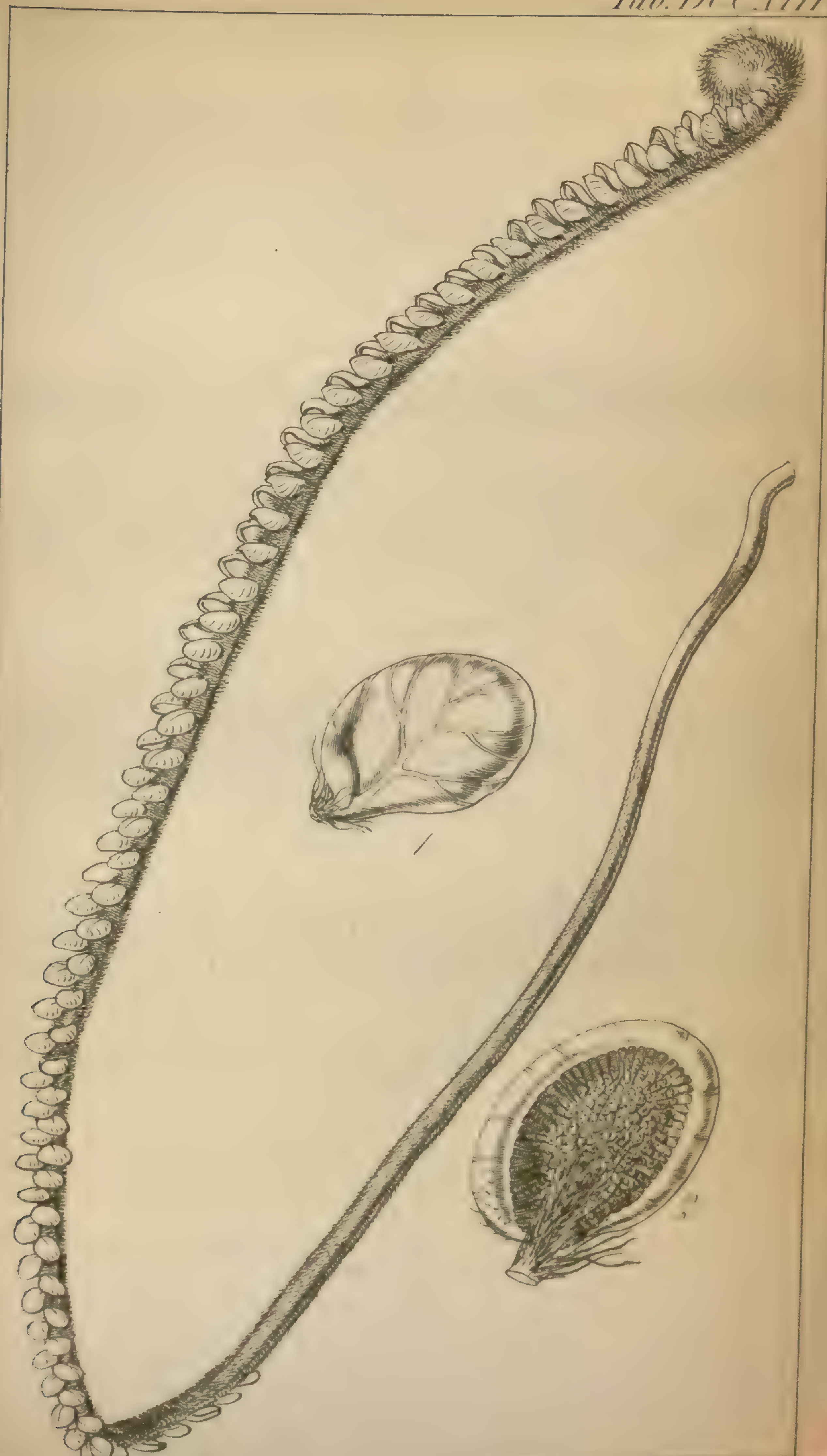
Robusta pinnata, stipite breviusculo compresso canaliculato, rachide crassa densissime ferrugineo-lanosa, pinnis omnibus secundis imbricatis rotundatis basi cordatis coriaceis supra convexis lateribus deflexis marginibus insigniter revolutis longe ciliatis costa subtus setoso-paleaceis, soris linearibus convolventibus discum subtus totum obtegentibus.

Jamesoniana cinnamomea. *Kunze, in Bot. Zeit.* 1844, p. 738.

HAB. El Equador. Abundant on the eastern flank of Cotopaxi, at an elevation of 1,400 feet above the sea-level, growing in company with *Culcita, Ribes frigidum, &c. Prof. W. Jameson, n.* 12; Columbia, *Hartweg, n.* 1516.

A very different species from *Jamesonia pulchra,* figured in Icones Filicum, tab. 178. And since our figure was prepared we find that Professor Kunze has published the n. 1516 of Hartweg's collection in the "Gazette Botanique de Berlin," under the name of *J. cinnamomea,* together with *J. scalaris* (Caraccas, *Linden, n.* 519), *J. verticalis* (Columbia, *Hartweg, n.* 1504), and two species "fronde pinnata," namely, *J. paleacea* (Caraccas, *Linden, n.* 505), and *J. hispidula* (Caraccas, *Moritz, n.* 72), making six species in all. To me a further examination of this beautiful genus seems to lead to the conclusion that its affinity is with *Gymnogramma;* for the normal form of the sori appears to be oblong or linear, though generally confluent, and frequently covering the whole disc of the pinnule beneath. The present species is much larger and stouter than *J. pulchra;* the silky wool is altogether of a deep ferruginous brown colour, shorter and more compact; the pinnæ are singularly thick and coriaceous, and all point forwards, and more or less downwards, and imbricate each other. Veins forked.

TAB. DCCXIII. Plant; *nat. size. Fig.* 1. Upper side of a pinna. *f.* 2. Under side:—*magnified.*



TAB. DCCXIV.

Juncus andicola. *Hook.*

Aphyllus, culmis lævibus acutis pungentibus inferne longe laxeque vaginatis, vaginis cylindraceis fissis membranaceis obtusis, panicula supradecomposita subglobosa densa subsessili tota intense fusca nitida, bracteis ovatis obtusis, floribus 6-andris, sepalis lanceolatis acuminatis dorso margineque pallidis, filamentis basi dilatatis, ovario obovato-trigono in stylum subæque longum attenuato, stigmatibus 3 subulatis papillosis.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 51.

This has the habit of our European *J. conglomeratus*, (J. communis, *E. Mey. and Kth.*), but appears to me truly distinct. It is a shorter and stouter plant, particularly stout at the base, quite smooth (not striated) on the surface, clothed with long, lax, membranaceous, leafless sheaths, for nearly half the height from the base. At about three inches below the sharp point, and from a small cleft with a small leaf-like cuspidate bractea at its base, arises the dense, conglomerate, very compound, subglobose panicle, altogether of a dark brown colour and glossy. Ramifications clothed with ovate bracteas, much shorter than the sepals, which latter are lanceolate, sharply acuminated, with a pale line at the back and a pale margin. Stamens 6. Filaments broad, subulate. Anthers oblong, yellow. Ovary with a much longer style than in *J. conglomeratus*.

The *Juncus Bogotensis*, H. B. K. is now referred by M. Kunth to *J. conglomeratus*, and the description is much at variance with our plant.

Fig. 1. Flower. *f.* 2. Stamen. *f.* 3. Pistil:—*magnified.*

2.
3.

TAB. DCCXV.

Acrostichum (Elaphoglossum) cardiophyllum. *Hook.*

Caudice longe repente ferrugineo-squamoso, stipitibus gracilibus squamosis, frondibus fertilibus sterilibusque cordatis marginatis obtusis obscure venosis sparsim squamulatis, squamulis subulatis atris.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 212.

This *Acrostichum* belongs to the same group with *A. ovatum*, Hook. and Grev. Ic. Fil. t. 146, and *A. squamipes*, Hook. Ic. Plant. v. 2, Tab. cxcvii., especially the latter, from Chacapoyas, Peru; but it is distinguished from both by the larger size, different form of the fronds, and by the nature and extent of scaly clothing. In our present species the fronds are truly cordate, and they are but sparingly dotted with distant, black, subulate scales.

TAB. DCCXVI.

Siphocampylus giganteus. *Cav.*

Pubescens, caule ramoso, foliis elongato-lanceolatis dentatis rugosis longe acuminatis basi in petiolum brevem attenuatis subsessilibus, pedunculis axillaribus solitariis unifloris folio brevioribus, flore magno, calycis tubo turbinato laciniis lanceolato-subulatis tubo subtriplo longioribus, corolla sursum ampliata curvata superne fissa 5-loba, lobis ovato-acuminatis, columna staminea longe exserta, antheris superne præcipue villosissimis.

Siphocampylus giganteus. *Don, Dict.* 3, *p.* 702; *De Cand. Prodr.* 8, *p.* 406.

Lobelia gigantea. *Cav. Ic. vol.* 6, *tab.* 513; *H. B. K. Nov. Gen. Am.* 3, *p.* 305.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 248.

Decandolle observes of the *Lobelia* (Siphocampylus) *fœtida*, H. B. K.—"*S. giganteo* affinis:" and indeed I scarcely see how they are to be distinguished. Our present plant, however, seems to be decidedly the species of Cavanilles, and is very striking, both from the length of its leaves and great size of its flowers.

TAB. DCCXVII.

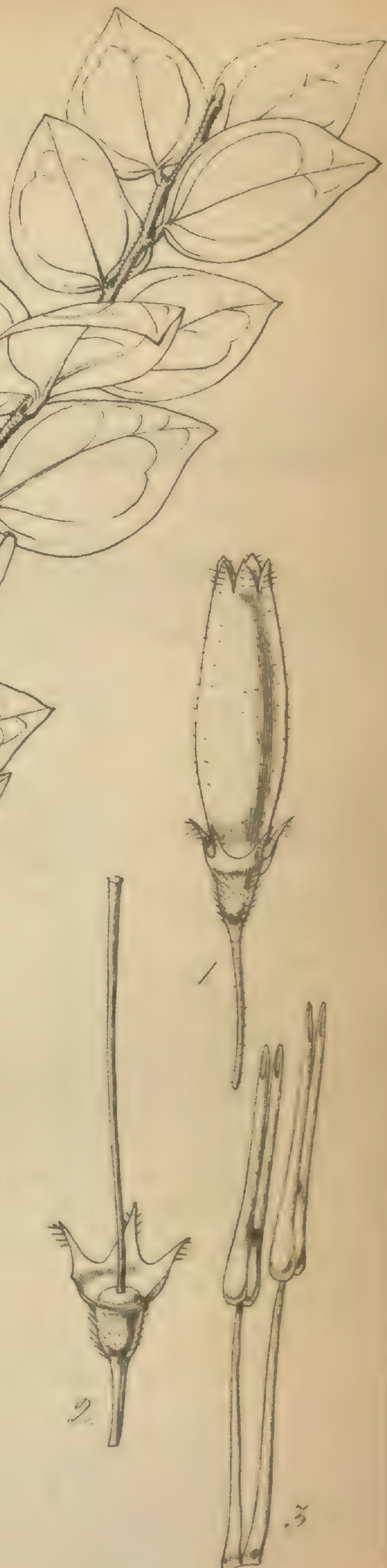
Vaccinium Muscicola. *Hook.*

Ramulis teretibus pubescenti-pilosis, foliis rotundato-ovatis acutis subsessilibus carnosis integerrimis basi subquinque-nerviis, pedicellis geminis gracilibus folium subæquantibus ebracteatis (nisi ad basin) unifloris, calycis tubo inferne ovario adhærente pubescente superne libero glabro, dentibus acutis, corolla tubuloso-urceolata (coccinea) 5-dentata glabra, antheris elongatis muticis apice bifidis.

Hab. Western flank of Chimborazo, at the superior limit of the forest, 13,000 feet above the sea-level, growing from the trunks of trees, where the roots are enveloped in moss. *Prof. W. Jameson*, 1844 (very rare).

This is a most distinct species of *Vaccinium*, an epiphyte, growing among moss at the upper limits of the forests of Chimborazo. The leaves when living, Dr. Jameson informs me, are fleshy; this occasions them to fall off so readily when drying, in which state they are not subcoriaceous but semi-pellucid, exhibiting lateral nerves (of which there are two principal ones on each side at the base) that become incurved before they reach the margin and anastomose with those above. In their areoles are copious, much branched, lesser veins, which have a downward direction, and of which the ultimate veinlets are free. The corolla is between cylindrical and urceolate, of a bright red colour, 5-toothed at the apex, and the teeth are hairy, like those of the calyx.

Fig. 1. Flower. *f.* 2. Section of the calyx, showing the pistil. *f.* 3. Stamens :—*magnified.*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TAB. DCCXVIII.

APHELANDRA? CARDUIFOLIA *Hook.*

Ramis teretibus spinosis, foliis alternis (!) oblongo-lanceolatis acutis brevissime petiolatis reticulatis spinuloso-serratis supra nitidis pilosulis subtus pubescentibus venis elevatis, spica terminali foliosa, foliis floralibus reliquis similibus sed minoribus, calyce bibracteato bracteis pilosis lanceolato-subulatis pungentibus utrinque spina solitaria, sepalis bracteis conformibus paulo minoribus espinosis, corolla tubulosa pubescente, labio superiore longiore bifido, inferiore trilobo.

HAB. Andes of Quito. *Prof. W. Jameson, n.* 166.

As far as I can judge from a solitary specimen and no fruit, this is a species of *Aphelandra*, not very distantly allied to our *A. acanthifolia* (TAB. CXIII.) yet differing from that and indeed from all described *Acanthaceæ* in having alternate leaves. Future and more perfect specimens may lead to its being referred to some other genus and order; in the meantime I am anxious it should have a place in this work. The spinous character of the stem appears owing to the decurrent teeth or spinous wings of the leaf, extending a little below the base, and remaining after the leaves have fallen away.

Fig. 1. Flower. *f.* 2. Calyx and bracteas. *f.* 3. Pistil:—*magnified.*

TAB. DCCXIX.

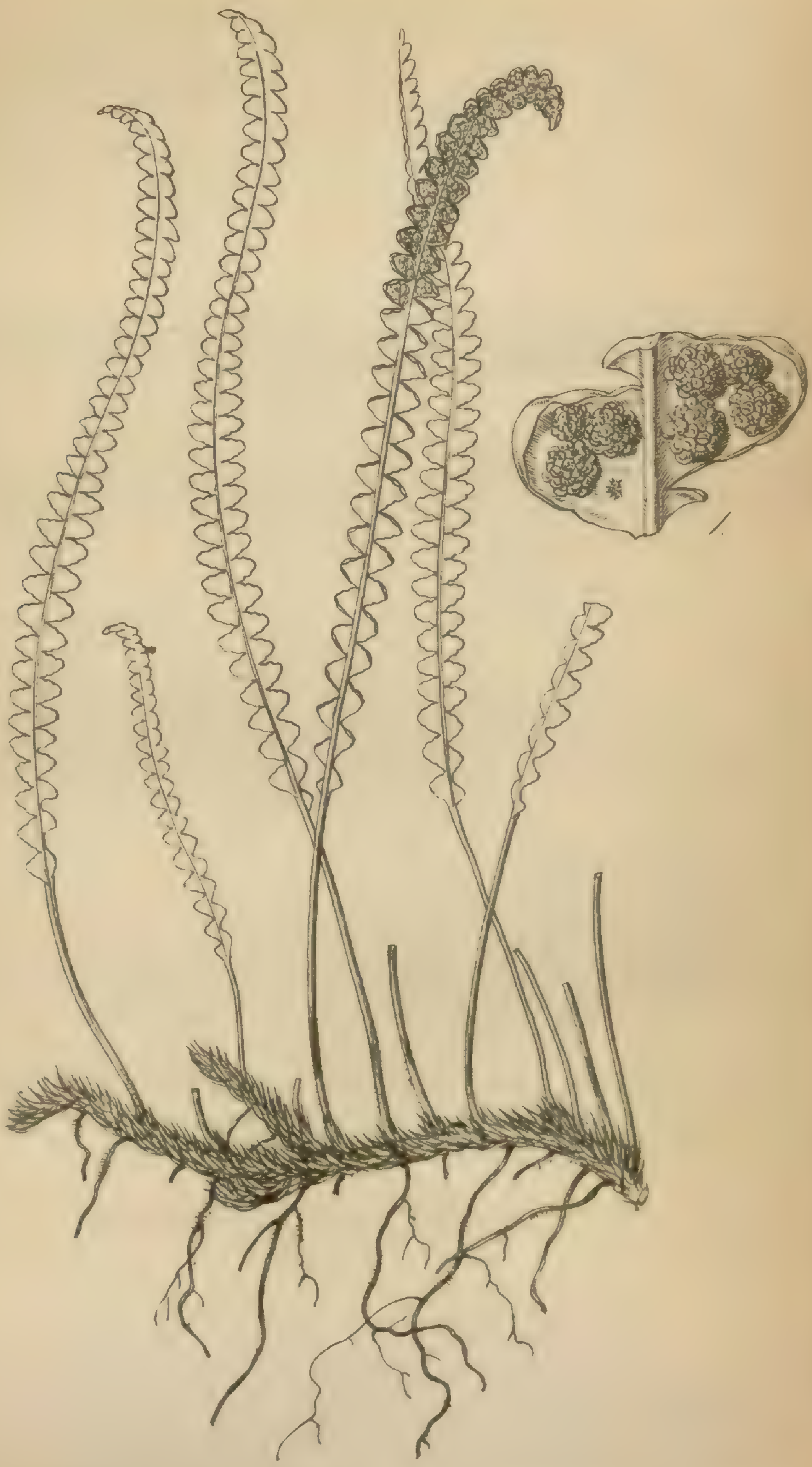
Polypodium subcrenatum. *Hook.*

Caudice repente crassiusculo dense squamoso radicante, frondibus erectis coriaceis petiolatis (petiolo breviusculo glabro) linearibus acuminatis profunde fere ad rachin pinnatifidis glabris subtus fuscescenti-glaucis, laciniis ovatis patentibus obtusis crenatis marginibus revolutis, soris singula lacinia subquaternis.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 215.

A small but well-marked species (allied to *P. rigescens*, Bory; Hook. et Grev. Ic. Fil. t. 216), with a long, creeping, branched caudex, moderately stout, clothed with brown, lanceolato-subulate scales, sending out from beneath copious branching fibrous roots, and from the upper surface several upright, linear, acuminate, erect, coriaceous, petiolated, deeply pinnatifid fronds, opaque on the surface on both sides; in a dry state, almost brown black on the upper side; beneath, of a brownish glaucous colour. Segments patent, ovate, obtuse, veinless, convex above, concave beneath, the margin more or less distinctly crenate and recurved, each bearing about four sori, which occupy nearly the whole disc. Stipes scarcely half the length of the frond, quite smooth and glabrous.

Fig. 1. Fertile segment of a frond:—*magnified.*



TAB. DCCXX.

Polypodium (Marginaria) punctulatum. *Hook.*

Caudice repente crasso dense fusco-squamoso squamis lanceolato-subulatis, fronde stipitata oblongo-ovata caudatim acuminata coriaceo-membranacea glabra profunde fere ad rachin pinnatifida, laciniis horizontaliter patentibus lineari-lanceolatis obtusis marginatis integerrimis supra punctatis nudis subtus in costis parce paleaceis, soris prope costam utrinque uniseriatis in singula areola solitariis, stipite frondem æquante compresso hinc plano nudo.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 127.

This belongs to that group of the genus *Polypodium* called *Marginaria* by Presl, and by Bory, who established the genus, as it would appear, upon the *Polyp. incanum* of Linnæus, but without taking the venation into account, which in that particular species is most difficult of detection. Its essential character is to have the sorus at the end of a veinlet, situated within a large 6-sided areola near the costa, formed by a union of the veins, as shown in our figure. This structure is best seen in the present instance by holding the specimen between the eye and the light, when the veins are quite pellucid. Whether this structure of the veins be considered of generic avail or not, it is a valuable aid in the grouping and distinguishing species; for this difference of venation is not always accompanied with difference in habit: many *resemble* the present species which belong to true *Polypodium*. Mr. J. Smith unites *Marginaria* with *Goniophlebium*. I have derived the name of the present species from the pale dots on the upper surface, which correspond with the receptacles of the sori beneath.

Fig. 1. Portion of a segment with sori:—*magnified.*

TAB. DCCXXI.

Polypodium chrysolepis. *Hook.*

Caudice longe repente squamoso, frondibus subcoriaceis simplicibus uniformibus lanceolatis petiolatis obtusis integerrimis subtus pallidis utrinque squamis peltatis longe acuminatis aureo-nitentibus vestitis, soris intra marginem et costam uniserialibus, venis furcatis obscuris, stipite squamoso, venula superiore sorifero.

Hab. Andes of Quito, creeping among mosses. *Prof. W. Jameson, n. 73.*

Caudex longe repens, radicosus, ramosus, squamis subulatis longis aureo-fuscis imbricatis tectus; radicibus fibrosis tomentosis. *Stipites* 2-2½ uncias longi, erecti, sparsi, squamosi, squamis ovatis acuminatis peltatis. *Frondes* subcoriaceæ, simplices, uniformes, 3-4 uncias longæ, lanceolatæ, obtusæ, integerrimæ, obscure venosæ (venis furcatis) virides subtus pallidæ, utrinque squamis copiosis, aureo-nitentibus (junioribus præcipue), ovatis, tenui-acuminatis, peltatis vestitæ. *Sori* subrotundi, uniseriatim dispositi inter costam et marginem in dorso venulæ superioris siti. *Capsulæ* dense squamis immixtæ.

This is one of the handsomest among the simple-fronded *Polypodia*, and quite unlike any with which I am acquainted, not only in the caudex and stipes, but also in the upper and under-side of the fronds, which when in perfection are clothed with copious, imbricated, golden-coloured, glossy, peltate scales, in age, however, becoming paler.

Fig. 1. Fertile portion of a frond :—*magnified;* most of the capsules from one sorus being removed to show its insertion.

TAB. DCCXXII.

Boronia rhomboidea. *Hook.*

Glabra, foliis sessilibus coriaceis rhombeo-orbicularibus inferne cuneatis integerrimis coriaceis punctatis rufo-marginatis enerviis, floribus brevissime petiolatis axillaribus terminalibusque solitariis folio vix longioribus, filamentis omnibus glandulosis exappendiculatis, stigmate trilobo.

Hab. Side of the Western Mountains, Tasmania. *Ronald Gunn, Esq.*

Apparently a low shrub, in habit a good deal resembling the *Boronia crenulata* (Bot. Mag. t. 3915), though very different in the foliage, and still more so in the flowers, which however are in both of a deep rose-colour, but here the stamens (which appear to be all antheriferous), instead of being clothed with copious, long, slender hairs, are beset with large sessile glands. The stigma, too, which in *B. crenulata* comes to a mere point, is here 3-lobed. In both, the ovary is situated upon a large, fleshy disc.

Fig. 1. Leaf. *f.* 2. Flower. *f.* 3. Flower from which the petals are removed. *f.* 4. Pistil and hypogynous disc:—*magnified.*

TAB. DCCXXIII.

Lycium Quitense. *Hook.*

Fruticosum glabrum, foliis ellipticis obovatisve obtusis subcoriaceis integerrimis, pedunculis axillaribus aggregatis unifloris, floribus nutantibus, calyce bipartito, corolla campanulato-infundibuliformi limbo patente 5-lobo, dentibus (siccitate) fere obsoletis, staminibus inclusis.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 200.

Of this I possess only a solitary specimen from my excellent friend Dr. Jameson; it is unquestionably a congener with the *Lycium fuchsioides*, H. B. K., lately figured in the Botanical Mag. t. 4149. For the present I retain the name of *Lycium*, but we may soon expect a valuable memoir on this and allied genera of *Solaneæ* by Mr. Miers, illustrated with excellent figures, when the present species and its allies will be found to constitute a new genus according to that gentleman, and assuredly a very natural one. The individual here represented has foliage much resembling the *L. fuchsioides*, but more rigid and somewhat coriaceous. The flowers are considerably different from that species. The calyx is small, cut almost to the base into two nearly equal, broadly oval, concave lips, obscurely two- or three-toothed at the apex. The corolla is short, infundibuliform, approaching to campanulate, the limb spreading, of five ovate lobes, with teeth between, but small, and in the dried state easily overlooked, or then with difficulty seen at all. The lower half of the tube within is hairy. The filaments of the stamens included. Anthers oblong. Ovary elliptic, obtuse. Style as long as the stamens. Stigma bifid.

Fig. 1. Calyx and pistil. *f.* 2. Ovary and base of the style. *f.* 3. Single stamen, and portion of the base of the corolla:—*magnified.*

TAB. DCCXXIV.

Phebalium grandiflorum. *Hook.*

Totum pubescenti-stellatum, foliis oblongis subundulatis obtusis, umbellis subtrifloris, calyce minuto, staminibus 20 et ultra, ovario superne trilobo stellato-pubescente, stylo filiformi, stigmate 3-lobo.

Hab. Swan River, West Australia. *Mr. James Drummond*, 1*st Coll. n.* 12.

This is considerably different from any hitherto described *Phebalium*, and departs from the normal structure of that genus in having a considerable number of stamens, only three ovaries combined for two-thirds of the way from the base, and large flowers. The calyx is peculiarly minute and indistinct. The petals are oblong or obovate, clothed at the back, as is most of the surface of the plant, with stellated and pedicellate tufts of hairs.

Fig. 1. Flower. *f.* 2. The same more expanded. *f.* 3. Stamen. *f.* 4. Ovary. *f.* 5. Transverse section of the same. *f.* 6. Portion of a leaf, showing the nature of the pubescence:—all more or less *magnified*.

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TAB. DCCXXV.

Villarsia involucrata. *Hook.*

Erecta ramosa, caule folioso, foliis cordato-rotundatis obtusis sublonge petiolatis, petiolis basi vaginantibus, pedunculis axillaribus terminalibusque monocephalis, capitulis involucratis bracteatisque, involucri foliolis 2 ovatis acutis concavis, floribus sessilibus, calycis 5-lobi tubo piloso ovario semiadnato laciniis ovato-acuminatis, corollæ infundibuliformi-rotatæ intus pilosæ laciniis ovatis acutis.

Hab. Swan River, Western Australia. *James Drummond, n. 7,* 1845.

This is probably a native of marshy ground, and, at first sight, has more the habit of *Ranunculus* than of any Gentianeous plant. It seems, however, to be a true *Villarsia;* though a species very unlike any that has been hitherto described, and remarkable for its flowers being sessile, and collected into rounded, bracteated, and involucrated, pedunculated heads or capitula. The leaves, rather long and on petioles sheathing at the base, are nearly orbicular, approaching to cordate. Each flower is rather small, apparently yellow; the calyx has a pilose or villose tube, of which the lower half is adnate with the ovary; the hairs very long; limb 5-lobed, the lobes ovato-acuminate, about the length of the corolla. Corolla hairy at the throat. Stamens 5, exserted. Style much longer than the stamens. Stigma bifid.

Fig. 1. Head of flowers and involucre. *f.* 2. Single flower. *f.* 3. Corolla (and base of the calyx-tube) with stamens and pistil. *f.* 4. Pistil. *f.* 5. Section of the ovary:—*magnified.*

TAB. DCCXXVI.

Xanthosia ciliata. *Hook.*

Subpubescens basi fruticosa, caulibus plurimis ex eadem radice erectis ramosis, foliis linearibus v. lineari-spathulatis acutis integris vel apicem versus 3-dentatis basi articulatis membranaceo-vaginantibus, vaginis longe ciliatis, pedunculis axillaribus simplicibus v. divisis bracteatis, umbellis nutantibus, involucri involucellique foliolis tripartitis, dentibus calycinis cordatis acuminatis petala superantibus deciduis, mericarpiis 5-jugis.

Hab. Swan River, Western Australia. *James Drummond, n.* 237, (1843).

Radix subfusiformis, descendens, perennis, ramosa; ad collum multiceps. *Caules* digitales et ultra, vix spithamæi, erecti, ramosi, rigidi, inferne fruticosi nudi, superne foliosi. *Folia* vix unciam longa, linearia, erecto-patentia, subspathulata, integerrima, uninervia v. apicem versus tridentata, marginibus paululum reflexa, subincrassata, basi attenuata, sessilia, articulata et membrana longe ciliata vaginantia. *Pedunculi* axillares, simplices vel furcati, solitarii, folium æquante, bracteati, bracteis parvis linearibus integris. *Umbellæ* subglobosæ, 3-6-8-floræ. *Involucra involucellaque* unilateralia, ut videtur semper solitaria, tripartita v. subtriphylla, basi pedicellisque ciliatis. *Fructus* subrotundo-ovatus, cordatus, compressus. *Mericarpia* jugis 5 elevatis, æquidistantibus, lævibus. *Calycis lobi* 5, cordato-acuminati, petaloidei, petalis longiores, vix peltati, demum decidui. *Petala* induplicata. *Stylopodia* majuscula. *Styli* erecti, subulati.

A very remarkable plant, and evidently I think referable to the same genus with our *X. dissecta* (*Leucolæna*, Br.) from Tasmania (Tab. cccii.), but extremely different in the foliage, and in the shape of the calycine teeth or segments.

Fig. 1. Leaf. *f.* 2. Flower and involucral leaf. *f.* 3. Flower. *f.* 4. Calycine lobe. *f.* 5. Petal. *f.* 6. Section of fruit. *f.* 7. Upper portion of ditto :—*magnified.*

TAB. DCCXXVII.

PHEBALIUM SQUAMULIGERUM. *Hook.*

Ramis ovariisque (præcipue) squamulosis, squamis peltatis radiatim spinulosis appressis, foliis anguste oblongis obtusis, umbellis plurifloris, staminibus sub-10, ovario profunde trilobo, stylo superne latiore, stigmate magno trilobo.

HAB. Collected between Swan River and King George's Sound. *Mr. James Drummond.*

The present plant is unquestionably of the same genus of *Rutaceæ* with that figured at TAB. DCCXXIV. It differs, however, remarkably in its clothing. The leaves indeed, except the young ones, are naked; but the branches and ovaries, and all the other parts of the plant which in our *P. stelligerum* are covered with stellated and stipitate pubescence, are here beset with little, sessile, peltate scales of a beautiful structure when seen under a microscope, or they may be considered as rigid radiating hairs, united by a scale-like membrane forming the disc of the scale. There are besides other differences. The flowers are more numerous in the umbel, and much smaller; the petals are more acute; the anthers have a more decided connectivum; the ovaries are freer; the style is shorter and thicker upwards; and the lobes of the stigma are much larger.

Fig. 1, 2. Flowers. *f.* 3. Stamen. *f.* 4. Pistil. *f.* 5. Transverse section of an ovary. *f.* 6. Front, and—*f.* 7. side view of a ciliated scale:—all more or less *magnified*.

TAB. DCCXXVIII.

Triglochin centrocarpum. *Hook.*

Annuum, radice fibrosa, foliis radicalibus parvis lineari-setaceis obtusis basi dilatato-membranaceis, scapis folio multo longioribus, floribus spicatis, fructibus lineari-pyramidatis 3-locularibus (loculis 3 alternis abortientibus), loculis (seu carpellis) trigonis dorso carinatis, angulis 2 alatis alis basi calcaratis, stigmatibus tribus globosis sessilibus villoso-velutinis.

Hab. Swan River, Western Australia. *Mr. James Drummond, n.* 5, 1845.

We have here a new and very pretty species of *Triglochin,* from Mr. Drummond's last collection of Swan River plants. It is small, but quite distinct from any yet described. The small plants seem to grow in a tufted or cæspitose manner. Leaves $\frac{1}{2}$ to $\frac{3}{4}$ of an inch long, narrow-linear, approaching to setaceous, obtuse, the base singularly dilated, concave and sheathing. Scapes 2-3 inches high, slender, the upper half occupied by the spike of from 5-7 flowers. Our specimens are with immature fruits, so that the perianths are unknown to us; the scars whence the sepals have fallen, only, remaining upon a thickened, fleshy, elongated receptacle, on which rests the elongated linear-pyramidal, 3-celled capsule, crowned with three globular, velvety stigmata. Each perfect cell (or carpel) alternates with an abortive one, and is trigonal, the dorsal surface plane, with a slightly elevated, central line or carina, and on each side a prominent edge or wing, which at the base is prolonged into a short but prominent spur: hence the base of the fruit presents six of these spurs.

Fig. 1. Capsule. *f.* 2. Transverse section of the fruit, showing the three perfect cells or carpels and the three alternating abortive ones. *f.* 3. Vertical section of a cell or carpel. *f.* 4. Immature seed:—*magnified.*

1

2

3

4

TABS. DCCXXIX, DCCXXX.

RUBUS PULCHERRIMUS. *Hook.*

Fruticosus, totus appresso-pubescenti-sericeus, caule terete, foliis longe petiolatis amplis quinato-palmatis, foliolis sessilibus lato-lanceolatis acuminatis ciliato-serratis parallelim nervosis, stipulis lato-subulatis acuminatis membranaceis, pedunculis axillaribus brevissimis pedicellisque bracteatis, floribus compactis cymoso-paniculatis, calycis lobis acuminatissimis, petalis nanis obovato-subrotundis.

HAB. Java. *Thomas Lobb.*

There would be some pleasure in studying the *Rubi* of our country, if any of the species were only half as beautiful as the present, and but a twentieth part as distinct. Besides the elegant form of the leaves, their copious serratures, and the close parallel venation, they are clothed on both sides, as is the whole plant, with a compact, appressed silky down. I find no species described that at all agrees with this plant.

Fig. 1. Flower. *f.* 2. Petal:—*magnified.*

1.
2.

TAB. DCCXXXI.

Triglochin Calcitrapa. *Hook.*

Nanum, cæspitosum, annuum, foliis brevibus lineari-setaceis basi membranaceo-dilatatis, capsulis linearibus 3-locularibus basi in spinas longas 6 didymas horizontales productis, loculis dorso rotundatis, sepalis ovatis acuminatis.

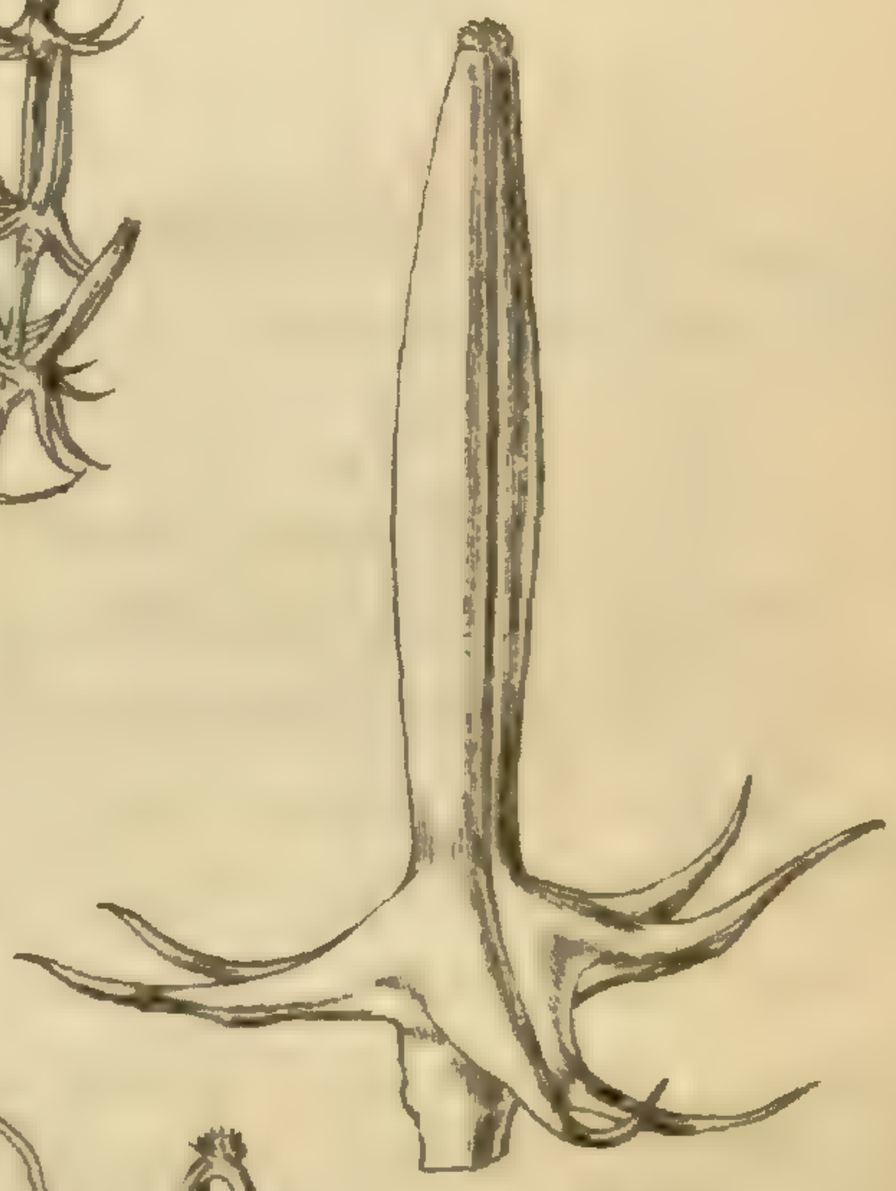
Hab. Swan River, Western Australia. *Mr. James Drummond. n.* 17, 1845.

At our Tab. dccxxviii, is figured a small annual species of *Triglochin* with winged fruit, and that fruit, at the base, produced into six short spines. In the present instance, besides a different shape of fruit (the cells being destitute of wings and rounded at the back), the base is prolonged into six very long horizontal spines, placed in pairs, giving the fruit a miniature resemblance to that instrument of war, the Caltrops, whence is derived the specific name.

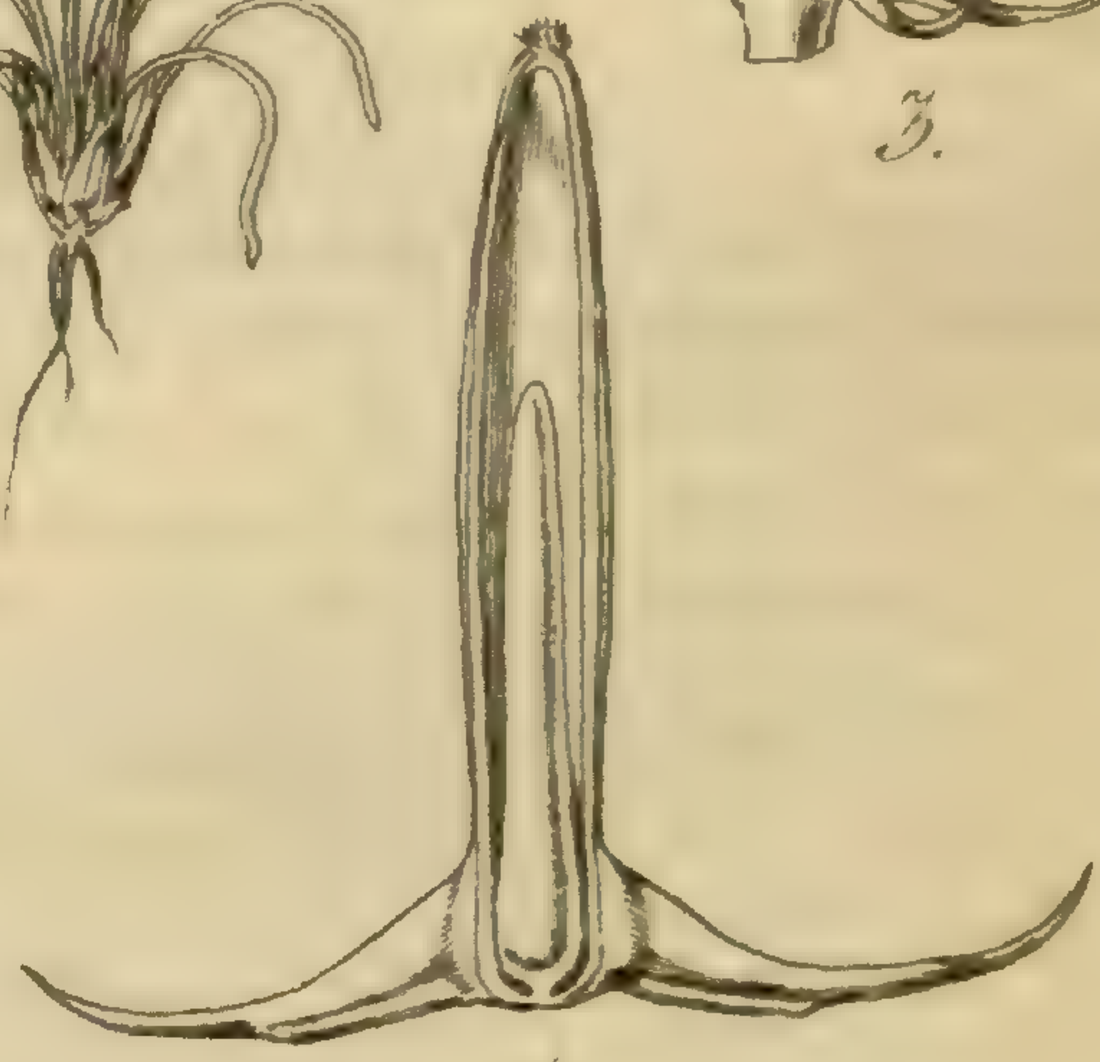
Fig. 1. Flower. *f.* 2. Immature fruit or ovary. *f.* 3. Fruit. *f.* 4. Vertical section of the same. *f.* 5. Transverse section of the ovary :—*magnified.*

1.

2.



3.



4.

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TAB. DCCXXXII.

Meconopsis heterophylla. *Benth.*

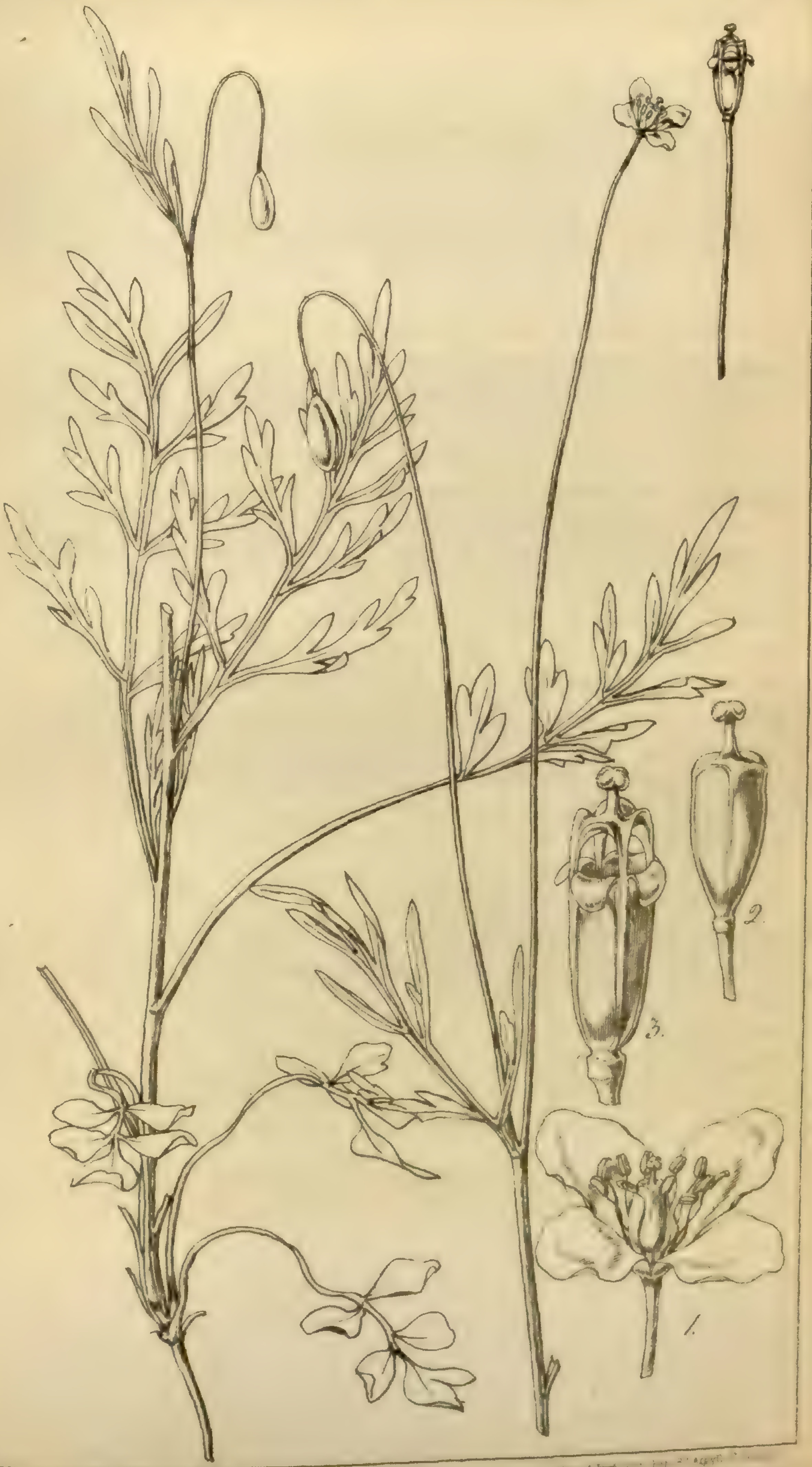
Glabra, caule folioso, foliis pinnatifidis inferioribus longe petiolatis, radicalium segmentis ovatis integris rarius hic illic fissis, caulinorum oblongis pinnatifidis, supremorum sessilibus linearibus plerumque integris, pedunculis gracilibus elongatis unifloris, floribus parvis, stylo subelongato, stigmate capitato-quadrilobo, capsula obovato-turbinata 4-angulata, valvis 4 intra angulos reflexis.

Meconopsis glabra. *Benth. in Hort. Trans. 2nd Ser. v.* 1, *p.* 40. *Torr. and Gray, Fl. N. Am.* 1, *p.* 61.

Hab. California. *Douglas, Nuttall, Coulter.*

A small Californian Papaveraceous plant, with the lower leaves on long petioles; the radical ones are pinnatifid, or almost pinnate, with oval or obovate, entire, or rarely slightly cleft pinnæ; the intermediate stem-leaves are bipinnatifid, their segments linear-oblong; the uppermost, which moreover are sessile, are simply pinnatifid with linear segments, rarely and only the lowest ones again pinnatifid. Peduncles generally terminal, long, slender, the apex drooping while in bud, and then bearing two oval sepals, afterwards the flower becomes erect, and the sepals are caducous. The flower is small; petals red. Stamens about 12. Germen between obovate and turbinate, with four prominent, longitudinal angles, a conspicuous style, and a four-lobed, capitate stigma. The fruit scarcely differs in shape from the germen, except in being longer. It opens by four valves beneath the persistent style, and between the four angles which internally tally with the placentæ.

Tab. dccxxxii. Upper right-hand figure, a capsule; *nat. size. Fig.* 1. Flower. *f.* 2. Pistil. *f.* 3. Ripe capsule:—*magnified.*


2.
3.
1.

TABS. DCCXXXIII, DCCXXXIV.

Agalmyla staminea. *Bl.*

Gen. Char. Agalmyla, *Br.* Agalmylæ sp. *Bl.*—*Calyx* 5-partitus acutus. *Corolla* tubulosa bilabiata. *Stamina* antherifera 2, antheris exsertis, loculis parallelis. *Stigma* bilamellatum (lamellis æqualibus). *Capsula* elongata, valvis strictis. *Semina* pendula, apice nuclei affixa, utrinque monotricha.—Herba *radicans*, foliis *alternis dentatis*. *Br.*

Agalmyla *staminea*. *Bl. Bijdr.* 767; *Br. in Horsf. Jav. p.* 116; *De Cand. Prodr.* 9, *p.* 263.

Justicia parasitica. *Lam. Ill.* 1, *p.* 42 (*not Vahl*).

Cyrtandra staminea. *Vahl, Enum.* 1, *p.* 105.

Hab. Java. *Blume, Thomas Lobb.*

A singular and very beautiful creeping epidendrous plant, with large, petiolated, alternate leaves, and rich clusters of large scarlet flowers, each with two singularly exserted stamens, the linear oblong anthers having a horizontal direction, and they are connected by their apices. The fruit I have not seen, but the ovary I find to arise from a 5-toothed, cup-shaped gland or disc; and within the corolla, a little above the base of the tube, is a circle of jointed subulate hairs, with a small globose gland at the tip.

The genus is well-named by Blume, from αγαλμα, an ornament, and ὕδη, a wood or grove, from its being so great an ornament to the woods in which it grows. The distinguished author just mentioned, intended it to include a second species, *A. asperifolia*, Bl., with opposite leaves and didynamous flowers; but this Mr. Brown separates from *Agalmyla*, and consequently modifies Blume's character, as given above.

Fig. 1. Corolla laid open. *f.* 2. Hairs from within the corolla. *f.* 3. Pistil and hypogynous disc or cup:—more or less *magnified.*

1.
2.
3.

TABS. DCCXXXV, DCCXXXVI.

Cyrtandra pendula. *Bl.*

Caule herbaceo inferne repente procumbente, foliis oppositis longe petiolatis elliptico-oblongis acuminatis serratis supra lævibus in venas infra villosiusculis, capitulis involucro 1-phyllo inclusis longissime pedunculatis pendulis, calyce 5-fido latere fisso. *DC.*

Cyrtandra pendula. "*Bl. Bijdr.* 763." *De Cand. Prodr.* 9, *p.* 281.

Hab. Moist mountains of Java. *Blume, Thomas Lobb.*

I feel a little doubtful whether this be the true *C. pendula* of Blume; for the cordate base of the leaves is not noticed, and the peduncles are described as "longissimi." In the circumstance first mentioned, and the shorter peduncles, our plant agrees better with the *C. bicolor*, Jack, a plant of Sumatra; and it is said of *C. pendula*, "Affinis *C. bicolori*:" so that probably the two are but varieties of one and the same species. The colour of the flowers of *C. pendula* is stated to be, "sordide albus in fundo corollæ punctis purpurascentibus."

TAB. DCCXXXVII.

(A).

Phascum cristatum. *Hook. et Wils.*

Subacaule, foliis spathulato-lanceolatis acuminatis inciso-dentatis laciniis dentato-ciliatis nervosis dorso cristatis, capsula immersa subsessili.

Hab. Swan River, West Australia. *James Drummond.*

Planta minima, vix $\frac{1}{20}$ unc. 6-9-phylla, junior filis confervoideis vel pseudo-cotyledonibus stipata. *Folia* erecta, subsecunda, concaviuscula, supra medium dilatata, profunde inciso-dentata, laciniis iterum dentato-ciliata, costa basi pallida evanescente superne validiore dorsoque ciliato-cristata percussa, læte viridia, areolatione laxa. *Vaginula* subrotunda, rufo-fusca. *Pedicellus* brevissimus. *Capsula* (in specimine nostro immaturo) ovato-globosa, acutiuscula. *Calyptra* campanulata, rufo-fusca. *Planta* mascula ad pedem fœmineæ, gemmiformis.

Allied to *P. inhærens*, from which it differs in the remarkable structure of its leaves, which are beautifully jagged and ciliated.

(A). *Fig.* 1. Plant; *nat. size.* *f.* 2. Fertile plant. *f.* 3, 4. Leaves. *f.* 5. Ditto, the foliage being removed:—*magnified.*

(B).

Phascum exiguum. *Hook et Wils.*

Subacaule, foliis subsecundis subulato-setaceis nervosis integerrimis, capsula subexserta nutante.

Hab. Swan River, West Australia. *James Drummond.*

Planta exigua, $\frac{1}{30}$ ad $\frac{1}{10}$ unc. 8-12-phylla. *Folia* basi ovato-lanceolata, nervo in subulam angustam longissimam educto. *Seta* pro more crassa, arcuato-inflexa. *Capsula* subglobosa, apiculata. *Calyptra* conico-campanulata, integra vel latere fissa, rufo-brunnea. *Planta* mascula gemmiformis ad basin fœmineæ.

Our specimens are not sufficiently ripe to determine whether this Moss really belongs to the present genus. If rightly referred hither, it differs from *P. flexuosum*, Schwaegr., its nearest ally, in the narrower and longer leaves, stout arcuate seta, globose capsule, and small reddish calyptra. The capsule, in a very young state, is ovate-acuminate, with a remarkably broad, abrupt base, resembling an apophysis.

(B). *Fig.* 1. Plants; *nat. size.* *f.* 2, 3, 4. Plants; *magnified.* *f.* 5, 6. Leaves; more *magnified*: from different parts of the plant.

A.

3.

2.

5.

4.

B.

1. 2. 3. 4. 5. 6.

TAB. DCCXXXVIII.

(A).

Schistidium arcuatum. *Hook. et Wils.*

Caule apice arcuato simplici, foliis trifariam imbricatis appressis rhomboideo-ovatis obtusiusculis denticulatis nervo subcontinuo, capsula exserta pendula subglobosa.

Hab. Swan River, West Australia. *James Drummond.*

Plantæ fertiles pusillæ, lineares et ultra; steriles duplo longiores. *Caulis* fertilis basi erectus, apice arcuato-inflexus. *Folia* arcte trifariam imbricata, appressa, carinato-concava, margine minutissime denticulata, nervo valido subcontinuo instructa; perichætialia lanceolato-acuminata, subfalcata. *Vaginula* subcylindrica. *Seta* brevis curvata, superne incrassata. *Capsula* (cum operculo) pyriformi-globosa, obtusiuscula, pendula, medio dehiscens, rufo-brunnea. *Calyptra* conico-mitræformis, membranacea, luteola. *Sporæ* majusculæ.

(A). *Fig.* 1. Plants; *nat. size.* *f.* 2, 2. Ditto; *magnified:* with separate calyptra and sporules. *f.* 3—6. Leaves from different parts of the plant; *more magnified.* *f.* 7. Separate capsule, seta, and vaginula:—*magnified.*

(B).

Schistidium pulchellum. *Hook. et Wils.*

Caule ramoso subincurvo, foliis imbricatis julaceis appressis ovatis apiculato-acuminatis integerrimis, nervo subcontinuo, capsula exserta pendula pyriformi, operculo conico-acuminato.

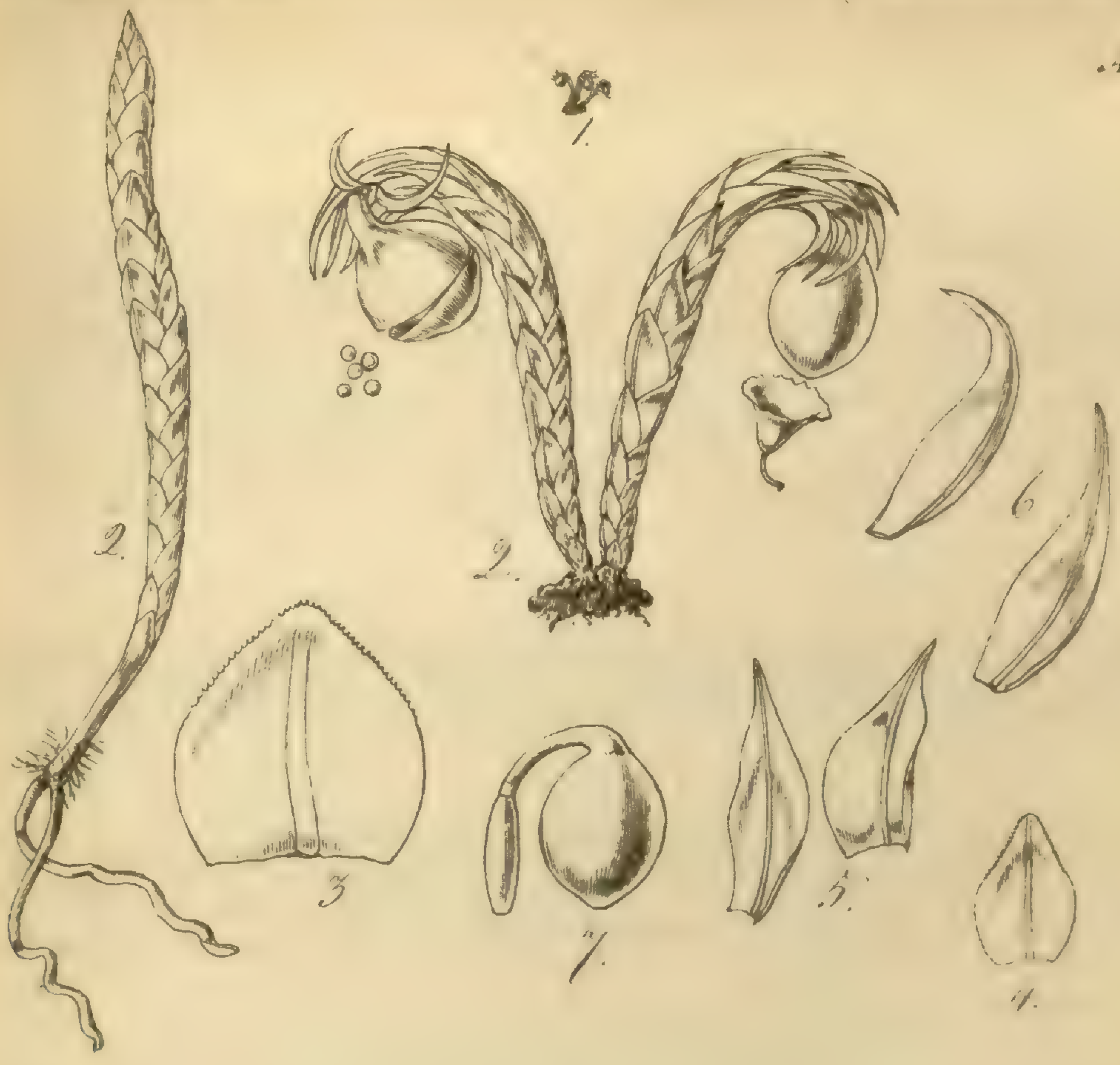
Hab. Swan River, West Australia. *James Drummond.*

Planta S. arcuato duplo longior, gracilior, nitida. *Caulis* lenissime curvatus, hic illic ramos erectos filiformes, surculis sterilibus similes, proferens. *Folia* arcte imbricata, nec trifaria, appressa, ovato-rotunda, brevissime acuminata, integerrima; nervo in foliis caulinis subcontinuo in ramulinis abbreviato; perichætialia ovato-lanceolata, longe acuminata. *Vaginula* cylindrica. *Seta* brevissima incurva, superne incrassata. *Capsula* pyriformis, pendula, rufo-brunnea. *Operculum* luteum, capsula duplo brevius. *Calyptra* conico-mitræformis, subcoriacea, lutea.

Similar to *S. arcuatum* in general aspect, but essentially distinguished by the entire, acute leaves, which are not at all trifarious, and by the pyriform capsule and small pointed operculum. The leaves resemble those of *Gymnostomum julaceum*, Hook.

(B). *Fig.* 1. Plant; *nat. size.* *f.* 2. The same; *magnified*: with calyptra separate. *f.* 3—7. Leaves from different parts of the plant; more highly *magnified.* *f.* 8. Capsule, seta, and vaginula:—*ditto.*

A.



B.

TAB. DCCXXXIX.

(A).

Weissia pallens. *Hook. et Wils.*

Foliis suberectis lineari-lanceolatis integerrimis evanidinerviis, capsula suberecta pyriformi, operculo conico-rostellato.

Hab. Swan River, West Australia. *James Drummond.*

Caules cæspitosi, subramosi, 2-3 lineas. *Folia* laxe reticulata, siccitate vix tortilia, luteola. *Seta* 2-linearis, pallide rubella. *Capsula* pyriformis, siccitate subcylindrica, sub orem paululum constricta, badia. *Peristomii* dentes 16, pyramidati, rubri. *Operculum* breve, basi conicum oblique rostellatum.

(A). *Fig.* 1. Plant; *nat. size.* *f.* 2. The same; *magnified.* *f.* 3, 4. Leaves; more *magnified.* *f.* 5. Capsule, with operculum, and—*f.* 6. Capsule from which the operculum is removed; *ditto.* *f.* 7. Portion of the peristome, and sporules:—highly *magnified.*

(B).

Orthodontium sulcatum. *Hook. et Wils.*

Foliis patenti-recurvis lineari-lanceolatis subplanis integerrimis evanidinerviis, capsula inclinata elliptico-oblonga brevicolla siccitate sulcata, operculo conico-rostellato.

Hab. Swan River, West Australia. *James Drummond.*

Caules cæspitosi, 2-lineares. *Folia* patentia, recurva, siccitate vix mutata, nervo subcontinuo, nitida, flavescenti-viridia. *Seta* semiuncialis, e luteo rufescens, nitida. *Capsula* brevicolla, elliptico-oblonga, basi attenuata, siccitate evidenter sulcata, rufo-brunnea. *Peristomii* externi dentes 16, oblongi, trabeculati, ferruginei: interni membrana basilaris brevis, processus 16 lanceolati peristomio externo paulo longiores, concolores. *Operculum* conico-brevirostre, rostro obliquo, capsula sextuplo brevius. *Sporæ* minimæ, rutilantes.

Allied to *O. lineare*, Schwaegr.; but differing essentially from that and the other species, in the furrowed capsule. The leaves also are shorter and not gradually tapering.

(B). *Fig.* 1. Plant; *nat. size.* *f.* 2. the same; *magnified.* *f.* 3, 4. Leaves; more *magnified.* *f.* 5. Vaginula; *ditto.* *f.* 6. Capsule, with operculum; *ditto.* *f.* 7. Portion of the peristome:—highly *magnified.*

(C).

Fabronia tomentosa. *Hook et Wils.*

Foliis ovato-lanceolatis longe piliformi-acuminatis ciliatis, capsula subglobosa, operculo planiusculo.

Hab. Swan River, West Australia. *James Drummond.*

Caulis pusillus, vage ramosus. *Folia* erecto-patentia, confertim imbricata, subpilifera, pilis longis pulcherrime ciliata, basi nervo brevi obsoleto instructa; perichætialia elliptico-oblonga, apice inciso-serrata. *Calyptra* albida, dimidiata.

This beautiful species differs from all others in the very long filiform processes at the margin of its leaf, in which it most resembles *F. Persoonii*, but that has the leaves much narrower than in our Moss.

(C). *Fig.* 1. Plant; *nat. size.* *f.* 2. Leaf; *magnified.* *f.* 3. Perichætial leaves; *ditto.* *f.* 4, 5. Capsules with and without an operculum; *ditto.*

A.

B.

C.

TAB. DCCXL.

Vaccinium Javanicum. *Hook.*

Glabrum, ramis angulatis fuscis nitidis, foliis remotis coriaceis sempervirentibus obovato-lanceolatis acutis integerrimis obligue venosis marginibus tenui-recurvatis basi in petiolum perbrevem attenuatis, racemis ebracteatis solitariis axillaribus folio brevioribus, pedicellis flore brevioribus, dentibus calycinis brevissimis, corolla elliptica ore 5-fido, staminum filamentis lato-subulatis hirsutis, antherarum loculis muticis apice longe tubulosis apice inæqualiter subtrifidis, stylo incluso.

Hab. Mount Salak, Java. *Thomas Lobb.*

An inhabitant of mountain regions in Java; and, as far as I can discover, a hitherto undescribed species. The leaves are coriaceous, glossy above, opaque beneath; the margin with a slightly reflexed edge. Racemes shorter than the leaves, with from 10-12 drooping flowers. Pedicels short. Ovary inferior, small, hemispherical, crowned by very indistinct calycine teeth. Corolla almost exactly elliptical; the mouth with five, small, spreading segments or teeth. Stamens and thick style included. Filaments broadly subulate, clothed, especially on the anterior side, with long, copious hairs. Anther-cells without awns, terminating upwards in a long tube, with about three unequal teeth at the mouth.

Fig. 1. Flower. *f.* 2. Calyx and pistil. *f.* 3. Stamen:—*magnified.*

1.
2.
3.

TABS. DCCXLI, DCCXLII.

Rubus Lobbianus. *Hook.*

Scandens fruticosus, ramis subteretibus petiolis pedunculisque pubescentibus aculeolatis aculeolis deflexis, foliis ovato-cordatis brevi-acuminatis subsinuatis dentatis basi profunde bilobis supra glabris canescenti-albis reticulatim venosis, paniculis axillaribus folio brevioribus seu terminalibus elongatis compositis bracteatis, bracteis oblongis fimbriato-fissis, floribus (parvis), calycis lobis ovatis acutis pubescentibus, petalis calyce duplo longioribus obovatis concavis apice bilobis, filamentis dilatatis, stylis elongatis numerosissimis.

Hab. Java. *Thomas Lobb.*

There are several species of *Rubus* from the Malay Islands; but not one that agrees with the present, a native of Java, which I have consequently named in compliment to its discoverer, Mr. Thomas Lobb, one of the collectors sent out by Mr. Veitch of the Exeter Nursery. It belongs to the same group with *R. Moluccanus*, L., *R. elongatus*, Sm., &c., which are peculiar to the Indian archipelago.

Fig. 1. Flower. *f.* 2. Section of the calyx with pistils. *f.* 3. Petal. *f.* 4. Stamen:—*magnified.*

3.

1.

1.

1.

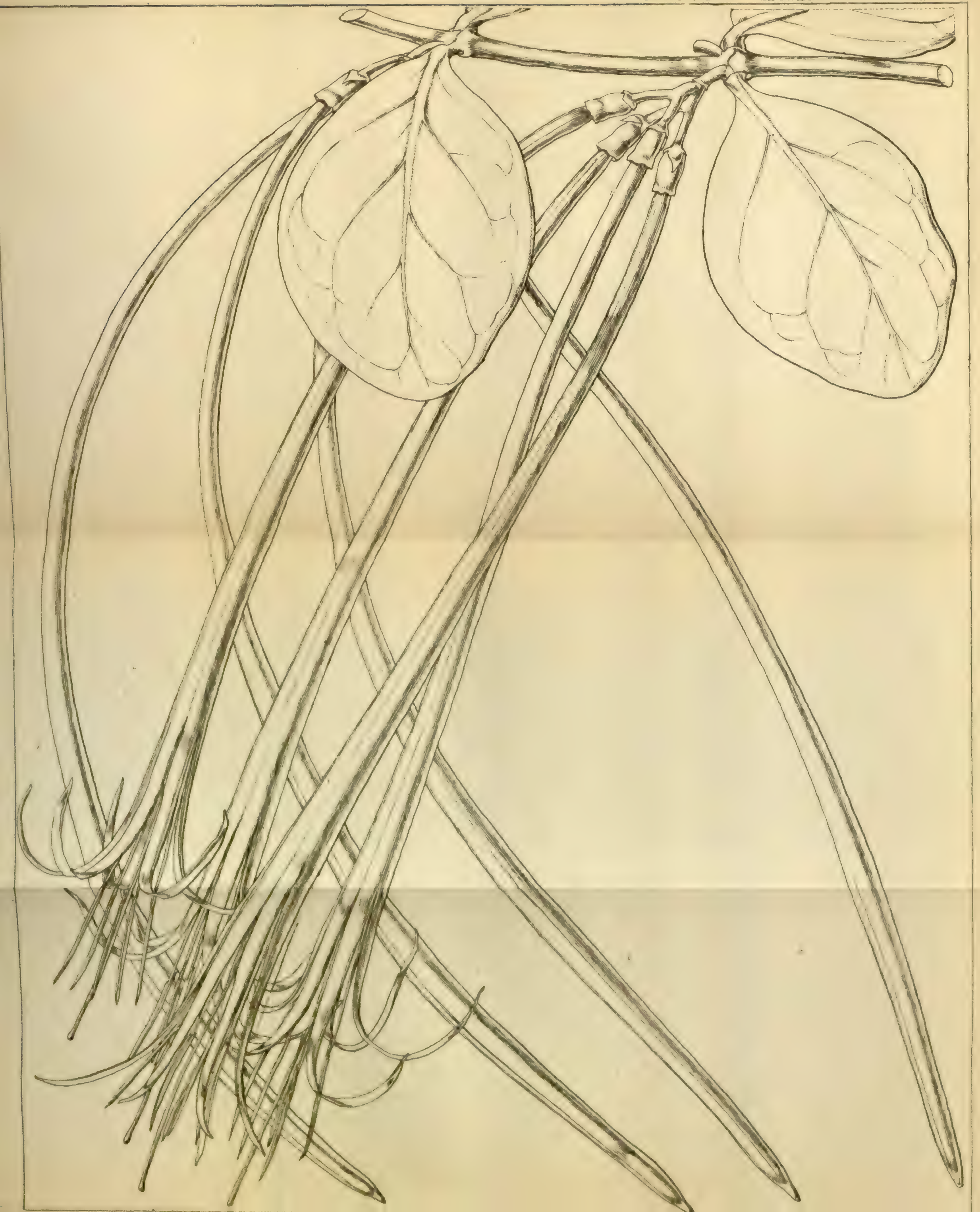
TABS. DCCXLIII, DCCXLIV.

Loranthus macranthus. *Hook.*

Hexamerus, caule tereti, foliis brevissime petiolatis orbiculari-ovalibus coriaceis, pedunculis bisdichotomis axillaribus, calyce unibracteato, bractea ovata calyce breviore, corollis omnium longissimis (pedalibus !), petalis anguste linearibus apice attenuatis liberis reflexis, staminibus petala subæquantibus stylo brevioribus, antheris lineari-angustissimis basi fissis.

Hab. Andes of Quito. *Prof. W. Jameson, n.* 244.

On first inspection of this plant, I was led to refer it to *L. grandiflorus*, R. and P., Fl. Peruv. 3, p. 45, t. 263; but that has only five petals, which are dilated towards the apex; a bractea longer than the ovary, much shorter flowers; but, above all, anthers of quite a different character, short, oblong, fixed to the filament by the middle of the back: whereas, in our plant, the anthers are very long, slender, tapering, and fixed by their base to the filament. The corolla is of an extraordinary length (12 inches), and appears still more remarkable in bud before the petals have separated, which they do only at the extremity, the rest of the corolla forming almost a cylindrical tube. Still nearer to our plant, in some respects, is the *L. dichotomus*, R. and P. (l. c. p. 45, t. 274); but that has larger leaves, corollas not half so long, shorter and broader anthers, and not "basifixæ."



TAB. DCCXLV.

Ranunculus Peruvianus. *Pers.*

Radice descendente subfibrosa, foliis radicalibus longe petiolatis subpilosis orbiculari-reniformibus crenatis, caulinis sessilibus in lobos lineares integros partitis, calyce appresso-villosissimo.

Ranunculus Peruvianus. *Pers. Syn. Pl.* 2, *p.* 103. *H. B. K. Nov. Gen. et Sp. Am.* 5, *p.* 44. *Deless. Ic. Select.* 1, *p.* 37. *De Cand. Prodr.* 1, *p.* 34.

Hab. Peru, and in moist places on Antisana; *Humboldt.* Andes of Quito; *Prof. W. Jameson, n.* 1.

I have not seen the fruit of this pretty *Ranunculus*. De Candolle says of it, "Carpella ovato-compressa, minima, lævia." Delessert's figure, which represents a much finer plant than that here given, exhibits the carpels as rather large than otherwise. The petals are five, subrotund; and the very hairy calyx is appressed to the corolla.

TAB. DCCXLVI.

(A).

Hookeria fissidentoides. *Hook. et Wils.*

Caule pinnatim ramoso, ramis complanatis rigidiusculis, foliis subdistichis lanceolato-ligulatis acutis binervibus apice subserratis, seta lævi, capsula ovato-cernua, operculo rostrato, calyptra glabra.

Hab. Woods, interior of Manchester, Jamaica, Dec. 1843. *W. Purdie.*

Caulis 1-2 uncialis, depressus, pinnatim ramosus, ramis complanatis; ramulis brevibus pinnæformibus, siccitate rigidis. *Folia* conferta rigidula, nitentia, læte viridia siccitate stricta, lateralia erecto-patentia, cætera appressa, basi ovata concava superne ligulata plana acuta vel brevissime acuminata, fere ad apicem binervia, areolis oblongis, minimis; *perichætialia* e basi ovata ligulata acuta serrata binervia. *Seta* semiuncialis, rufo-brunnea. *Operculum* capsulam subæquans, longirostrum. *Calyptra* albida, basi multifida.

Allied perhaps to *H. nitens*, Hornsch. in Fl. Bras; but that has the leaves recurved at the apex, and strongly serrate. It exhibits a striking resemblance to some species of *Fissidens*.

Tab. dccxlvi. (A). Plants; *nat. size*. *Fig.* 1. Leaves. *f.* 2, 3. Perichætium and leaves. *f.* 4. Capsule, with calyptra. *f.* 5. Capsule, with operculum:—*magnified.*

Cumingianæ. N. O. Musci.

(B).

Macromitrion brachiatum. *Hook. et Wils.*

Caule repente, ramis sterilibus brevibus fertilibus elongatis, ramorum sterilium foliis patule incurvis lanceolato-oblongis obtusis mucronatis, fertilium patentibus ovato-oblongis acutis, capsula immersa erecta oblonga gymnostoma, operculo conico-rostellato, calyptra conico-mitræformi pilosissima.

Hab. Philippine Islands, on the bark of trees. *Cuming, n.* 2195.

Caulis 3-4 uncialis. *Rami* steriles $1\frac{1}{2}$ lin. longi; fertiles unciales erecti, apice innovando ramulosi. *Folia* ramorum sterilium multifaria, confertissima, ligulata, carinata, integerrima, obtusa, nervo valido rubello in mucronem brevem exeunte, siccitate contorta, saturate viridia subopaca, areolis rotundis minimis: fertilium breviora dissita, quinquefaria, patentia, substricta, siccitate incurvo-appressa, nervosa; *perichætialia* elliptica, vaginantia, apice ciliato-denticulata. *Capsula* immersa, in vaginulam brevissimam subsessilis, badia. *Operculum* capsulæ tertiam partem metiens conicum, rostello recto. *Calyptra* operculo duplo longior, basi suboctofida, pilis numerosis flexuosis flavis obtecta.

A very remarkable Moss, to which we have seen nothing analogous except *Schlotheimia tecta* (Hook. and Wils.) found in Brazil by Mr. Gardner, which has also an immersed capsule.

(B). Plant: *nat. size*. *Fig.* 1. Leaf. *f.* 2. Small portion of the plant, with leaves. *f.* 3. Smaller leaf. *f.* 4. Capsule, operculum and calyptra. *f.* 5. Perichætial leaves: —*magnified.*

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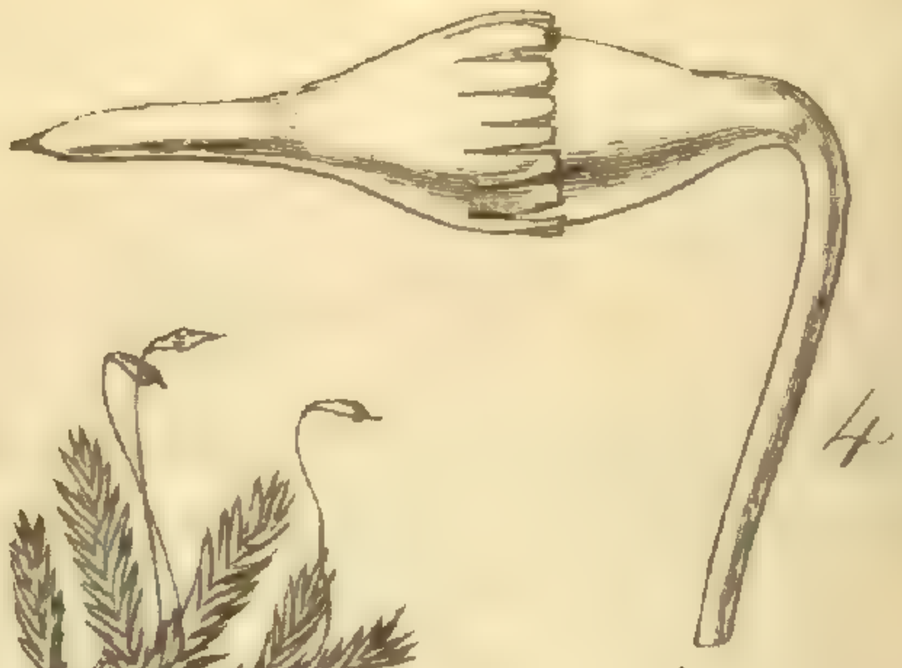

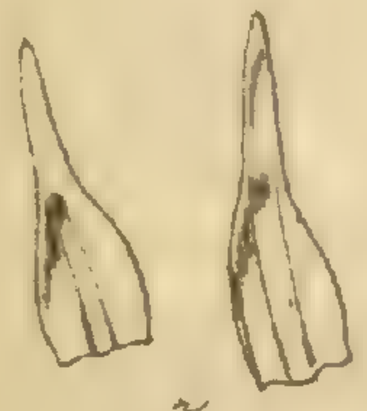

B.

TAB. DCCXLVII.

Aralia polaris. *Hombr. et Jacquin.*

Polygama herbacea inermis, tota setis mollibus laxis obsita, foliis (maximis) longe petiolatis orbiculari-reniformibus basi profunde cordatis marginibus multilobatis, lobis 3-5-dentatis dentibus subacutis, umbellis copiosis compositis partialibus multiradiatis globosis, involucris foliaceis, floribus densis, fructibus depresso-sphæricis exsuccis suberosis atris nitidis.

Hook. fil. Bot. Antarct. Voy. v. 1, *p.* 19.

Aralia polaris. *Hombr. et Jacq. in Voy. au Pole Sud, Bot., Phaner. t.* 2 (*plate only*).

Hab. Lord Auckland's Group and Campbell's Island, Antarctic Ocean; covering large tracts of ground with its ample and shining green foliage. *Hombron and Jacquinot; J. D. Hooker.*

An excellent representation of an umbel of this remarkable plant, is given in the work above quoted of Hombron and Jacquinot; and the species is fully described in the "Botany of the Antarctic Voyage;" where I had promised, in the forthcoming Volume (Eighth) of the Icones Plantarum, to give a Plate of the analysis of the flower and fruit.* It now only remains to refer to the accompanying figures which were drawn on the spot from the recent plant. *J. D. H.*

Fig. 1. Young perfect flower and pedicel. *f.* 2. Ovary of the same, the petals removed. *f.* 3. Stamen. *f.* 4. Female flower. *f.* 5. portion of the ovary cut through vertically, to show the position of the ovule. *f.* 6. Transverse section of an ovary. *f.* 7. A ripe fruit. *f.* 8. The same, cut through transversely. *f.* 9. Dorsal view of a seed. *f.* 10. Seed, cut through vertically. *f.* 11. Embryo:—all more or less *magnified*.

* In the Botany of the Antarctic Voyage, p. 20, where the reference to this Plate is given, for "Tab. dcci." read Tab. dccxlvii.

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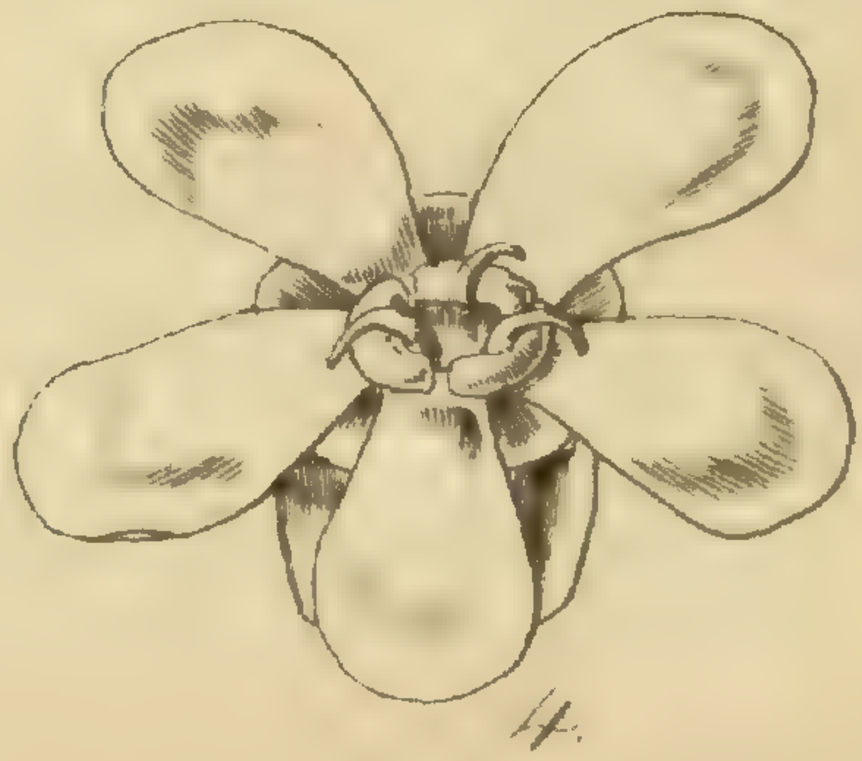
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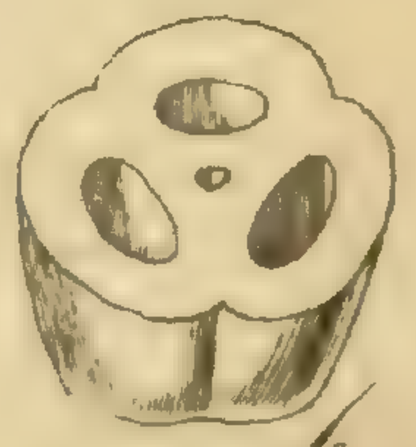
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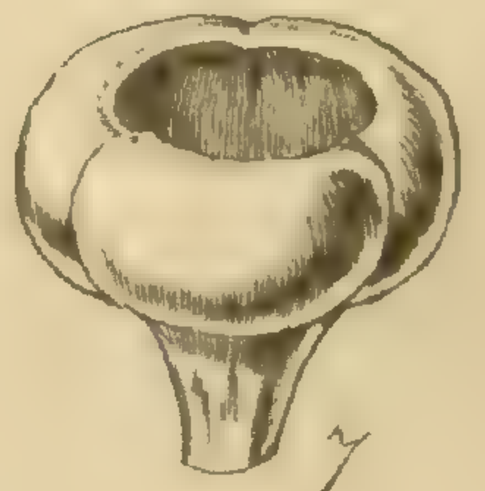
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TAB. DCCXLVIII.

Leptotheca speciosa. *Hook. et Wils.*

Caule erecto subramoso, foliis patentibus subsecundis ovato-lanceolatis marginatis serratis evanidinerviis, capsula erecta oblonga, operculo conico-subulato.

Hab. Maracaybo, in moist woods on the mountains. *W. Purdie,* Sept. 1844.

Planta spectabilis, dioica. *Caulis* uncialis, innovando ramosus. *Folia* dissita, patula, subacuminata, inferne margine reflexa, siccitate torta, saturate viridia, nervo infra apicem evanido, areolis elongato-hexagonis majusculis. *Seta* sesquiuncialis, rubra, subflexuosa. *Capsula* subcylindrica, magna, basi apiceque attenuata, pallide brunnea, ore rubro. *Annulus* revolubilis. *Peristomii* externi dentes longissimi angustissimi, vix trabeculati, rubri: interni membrana brevis flava, processibus irregularibus brevibus instructa. *Operculum* capsula dimidio brevius, erectum, rubrum. *Calyptra* subulata, torta, luteola.

A larger species than *L. Gaudichaudii,* Schwaegr., differing essentially in the serrated margined leaves, of a different texture, and the nerve ceasing below the apex. In the inner peristome it approaches very near to *Brachymenium.* The cellules of the leaves contain a loose, oblong body, probably the dried mass of chromule. The male flowers we have not seen.

Tab. dccxlviii. Plants; *nat. size.* *Fig.* 1, 2. Leaves; *magnified.* *f.* 3. Apex of ditto; more *magnified.* *f.* 4. Small perichætial leaves. *f.* 5. Vaginula. *f.* 6. Capsule, operculum and calyptra. *f.* 7. Capsule, peristome, and annulus. *f.* 8, 9. Outer and inner view of portions of the peristome:—all *magnified.*

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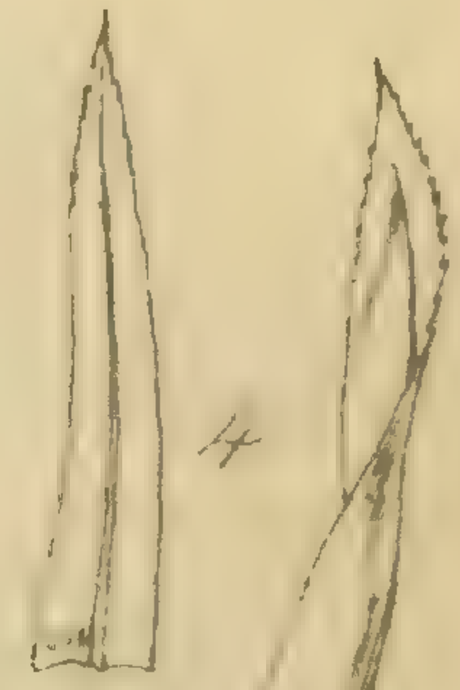
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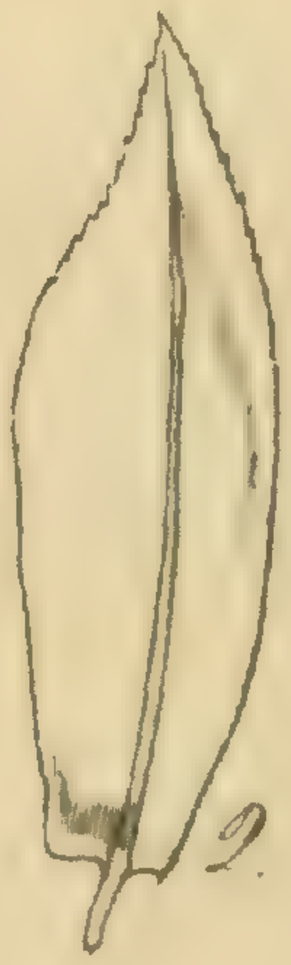
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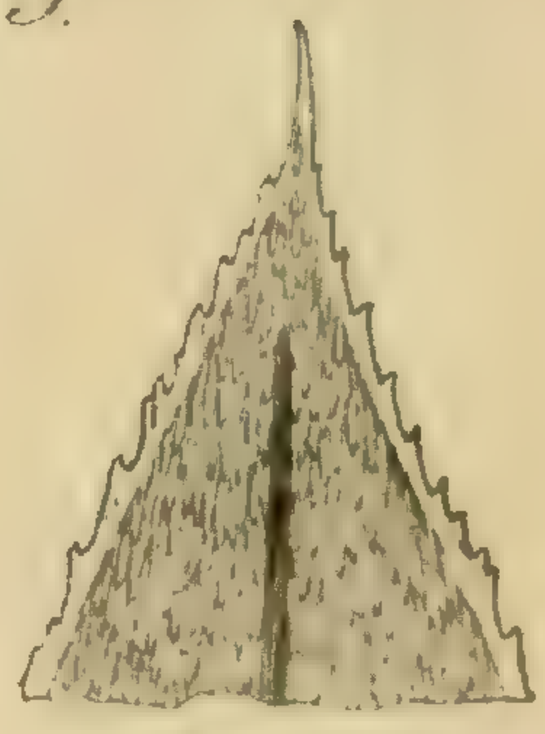
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TAB. DCCXLIX.

Polypodium (Eupolypodium) onustum. *Hook.*

Caudice repente ramoso dense squamoso, fronde ovato-acuminata coriacea bipinnata, rachi subulata, foliolis lato-lanceolatis basi cuneatis acutis inciso-pinnatifidis lævibus glabris, segmentis brevibus ovatis acutis, stipite rachibus nervisque primariis subsquamosis, soris copiosis subrotundis dorso venæ secundariæ insertis.

Hab. Andes of Quito. *Prof. W. Jameson. n.* 74.

In its rigid coriaceous texture and size, and general habit, the present species is allied to *P. Murorum*, Hook. at Tab. lxx. of this Work; but the frond is broader, and much more divided, so as to be constantly bipinnatifid (or almost bipinnate) with the segments again pinnatifid and entire, or incised. Here, too, the sori are very large, distinct, very numerous, not confluent. The veins are immersed, but prominent; and the principal ones (or secundary and tertiary rachides) bear scattered, appressed, brown scales.

Fig. 1. Pinnule, with sori:—*magnified.*

TAB. DCCL.

Baccharis (§ Disticha) ferruginea. *Pers.*

Ramosissima, ramis pinnatis seu subdichotome distichis, foliis arcte bifariam imbricatis ovatis complicato-carinatis subfalcatis acutiusculis subtumidis nitidis, intus basique externe dense lanatis, capitulis solitariis terminalibus vix exsertis, involucri squamis lineari-oblongis subcoloratis radiantibus receptaculo squamoso.

Baccharis ferruginea. *Pers. Syn. Pl.* 2, *p.* 425. *De Cand. Prodr.* 5, *p.* 426 (*excl. syn.* β. *Thyopsis*).

B. cataphracta. *Spreng. Syst. Veget.* 3, *p.* 462?

Molina ferruginea. *Ruiz et Pav. Syst. p.* 211.

Hab. Andes of Peru; *Ruiz and Pavon.* Eastern Cordillera of Quito, near the snow limit, 15,000 feet elev.; *Prof. W. Jameson, n.* 97. Columbia; *Hartweg, n.* 1114.

This species is well named *ferruginea* by Ruiz and Pavon. The leaves in the dried state, at least, are of a deep rusty brown colour, glossy, and often as if varnished. It is very different from *B. thyoides*, figured in our Bot. Miscell. t. 94, and still more from our *B. Scolopendra* (Ic. Plant. Tab. lxviii.) De Candolle had not seen the plant, otherwise he could not have said, "valde affinis *B. thyoidi*; he judged from a specimen of *B. thyoides*" received from M. Bonpland, and which he made a var. of *B. ferruginea*.

A fourth species is in my Herbarium, having an olivaceo-ferruginous tint; but differing from *B. ferruginea* in the much smaller, less imbricated, straighter, and more tumid leaves, giving a sort of moniliform appearance to the branches. I propose to call it:

B. *monilifera*, Hook.; ramis pinnatis subgracilibus distichis, foliis laxe imbricatis remotiusculis bifariis patentibus rectis ovatis complicatis tumidis (non carinatis) opacis intus dorsoque ad basin lanatis, capitulis terminalibus solitariis vix exsertis, involucri squamis lineari-oblongis subcoloratis, receptaculo paleaceo.

Hab. Mountains near Cuenca, El Equador, elev. 14,000 feet. *Prof. W. Jameson.*

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TAB. DCCLI.

Sinapidendron gracile, *Webb.*

(*Sect.* Podocarpica, *Webb.*)

Ramis elongatis lignosis gracilibus, foliis ovato-v. spathulato-lanceolatis tenuibus glabris margine sparse v. obsolete grosse dentatis denticulis muticis v. spinuloso-apiculatis, spicis ad apicem ramorum elongatis gracillimis, pedicellis filiformibus, carlycis foliolis apice pilosis, petalis longe unguiculatis, ovario gynophoro setaceo-filiformi duplo longiore, stylo brevi, stigmate capitato subdiscoideo, siliqua lineari, valvis tenuibus glabris subtrinerviis podocarpio gracili insidentibus, seminibus 1-seriatis pendulis, testa (immersa) mucilaginosa, cotyledonibus incumbentibus conduplicatis. *Webb.*

Sinapidendron gracile. *Webb, Spicil. Gorg. in Hook. Niger Voy. p.* 100. Tab. I.

Hab. Cape de Verd Islands, Valley of St. Nicholas. *Forbes.*

Mr. Webb informs us that this plant also exists in the Herbarium of the Royal Museum of Paris, having been gathered in the Cape de Verd Islands. The genus is founded on a Madeira species.

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Ovary. *f.* 4. Siliqua. *f.* 5. Seed. *f.* 6. Embryo. *f.* 7. Transverse section of the same :—*magnified.*

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TAB. DCCLII.

Sinapidendron Vogelii, *Webb.*

(*Sect.* Podocarpica, *Webb.*)

Ramis crassis nodosis, foliis rotundatis ovatisque crassis subtus nervosis pilis brevibus strigoso-hirtis margine dentatis v. demum crenato-dentatis basi integris cuneatis petiolatis, spicis basi hirsutis, calyce subsaccato-strigoso, petalis amplis flavis aurantiaco-maculatis? in unguem attenuatis, ovario lato gynophoro tenui triplo longiore, stigmate capitato subsessili, siliqua—?

Sinapidendron Vogelii. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 100, Tab. II.

Hab. St. Vincent, one of the Cape de Verd Islands. *Vogel.*

The region, to which the genus *Sinapidendron* belongs, we have elsewhere called *Macaronesian*. The two species from the Cape de Verd Islands, differ from the Madeira and Canarian ones, in having a long slender support to the ovary and fruit, analogous to that of the *Capparideæ*. No other characters, however, of value, present themselves, so as to authorize their separation as a genus. *P. B. Webb.*

Fig. 1. Flower. *f.* 2. Petal. *f.* 3. Stamen. *f.* 4. Ovary: —*magnified.*

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TAB. DCCLIII.

Melhania Leprieurii, *Webb.*

Caule fruticoso erecto ramoso, foliis ovalibus rotundisve serratis utrinque velutinis junioribus approximatis brevipetiolatis, floribus axillaribus terminalibusve brevissime pedunculatis solitariis rarius geminatis, involucelli triphylli unilateralis foliolis linearibus, staminibus 10-15, capsula globosa brevi villosissima. *Guill. et Perr.*

Melhania Leprieurii. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 110. Tab. IV, V.

Brotera Leprieurii. *Guillem. et Perr. Fl. Sen. Tent. p.* 85.

Hab. St. Jago, one of the Cape de Verd Islands, *Darwin, J.D.H.* Specimens from the same country are also in the Paris Museum.

Mr. Webb, *l. c.* has shown that *Melhania* and *Brotera* are one and the same; and further that the present species is perhaps too closely allied to M. *velutina,* Försk., or the M. *incana,* Heyne, and that it very much resembles M. *ovata.*

Fig. 1. Unexpanded flower. *f.* 2. Ditto, with sepals expanded :—*magnified.*

TAB. DCCLIV.

Lotus Brunneri, *Webb.*

Caule fruticoso procumbente, foliis pube cinerea appressa sericeis, stipulis lanceolatis sessilibus petiolo brevioribus caducis, foliolis obovato-lanceolatis, pedunculis paucifloris, calycibus urceolato-campanulatis sericeo-pubescentibus, dentibus lanceolatis acutis, corolla lutea, vexillo elliptico subacuto carina sublongiore. *Webb.*

Lotus Brunneri. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 119, Tab. III.

Lotus anthylloides ? *Brunn. Ergebn. p.* 86, (*non Vent.*)

Hab. Island of Sal, Cape de Verd. *Brunner.*

A plant perfectly distinct from the L. *anthylloides*, Vent. It differs from L. *Jacobæus* by the form of its leaves, by its appressed, and not villous and patent, pubescence, by its short sessile stipules, by the teeth of the calyx being merely acute, and not more or less filiform at the extremity, and by the form and colour of the corolla. *Webb.*

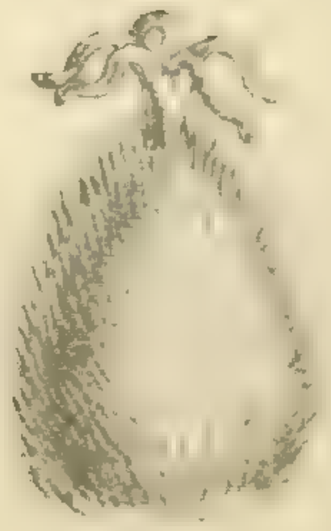
Fig. 1. Flower. *f.* 2. Vexillum. *f.* 3. Ala. *f.* 4. Carina. *f.* 5. Stamina and ovarium. *f.* 6. Ovarium. *f.* 7. Pod. *f.* 8. Seed :—*magnified.*

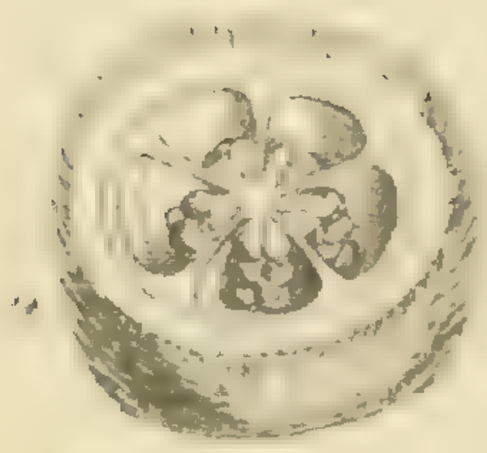
TAB. DCCLV.

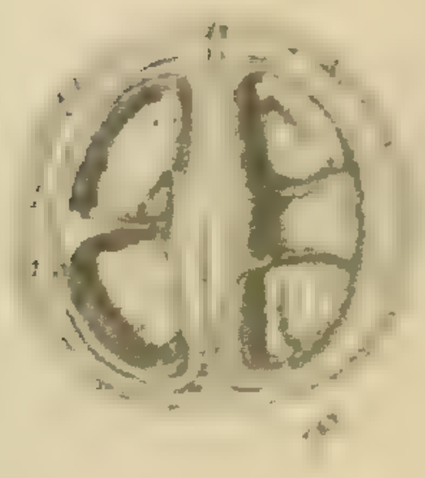
Melhania Leprieurii, *Webb.*

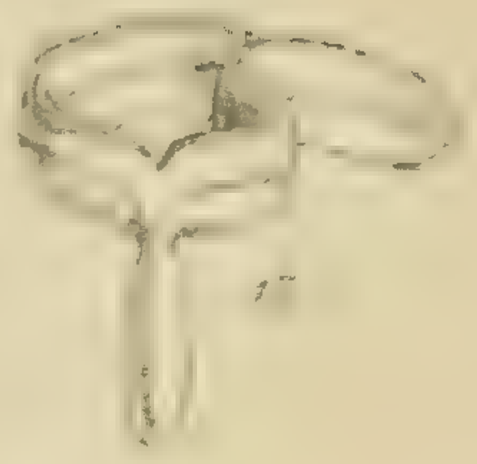
(*See* Tab. dccliii, next to which this figure and the references should be placed).

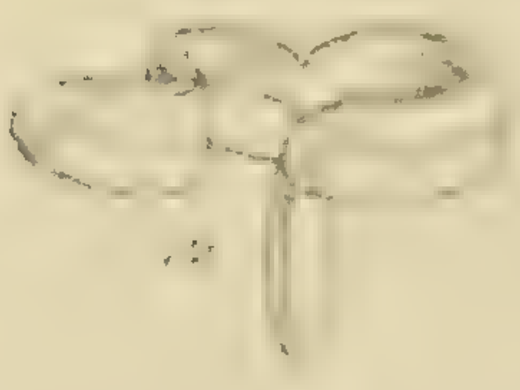
Fig. 1. Petal. *f.* 2. Portion of staminal column. *f.* 3. Ovarium. *f.* 4. Transverse section of ditto. *f.* 5. Ovule. *f.* 6. Ripe fruit. *f.* 7. Transverse ditto. *f.* 8. Longitudinal section of ditto. *f.* 9. Fruit burst open. *f.* 10. Seed. *f.* 11. Vertical section of ditto. *f.* 12 and 13. Embryo:—all more or less *magnified*.











TAB. DCCLVI.

Paronychia illecebroides, *Webb.*

Caule prostrato ramosissimo, ramis filiformibus pubescentibus, stipulis foliis lineari-lanceolatis v. linearibus acutis puberulis dimidio brevioribus, bracteis flore brevioribus, calycibus brevissime mucronulatis, mucrone recto v. inflexo.

Paronychia illecebroides. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 106, Tab. VII.

Herniaria illecebroides. *Ch. Smith, in Tuck. Voy. p.* 250, (*ex. Herb. Mus. Brit. J. D. H.*)

Hab. Common at the Cape de Verd Islands, from an elevation of 500 feet to the tops of the mountains. *Forbes, Vogel, J. D. H.*

Allied to P. *polygonifolia*, DC., but dissimilar in many respects, namely in the relative length of the leaves and flowers to the stipules, and in the form of the calyx and mucro. From P. *argentea*, Lam., which has the flowers usually capitate, it differs considerably. *Webb.*

Fig. 1. Flower, included within the bracteæ. *f.* 2. Bractea. *f.* 3. Flower. *f.* 4. The same laid open. *f.* 5. Ovary. *f.* 6. Seed. *f.* 7. Embryo :—all *magnified.*

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TAB. DCCLVII.

Lotus purpureus, *Webb.*

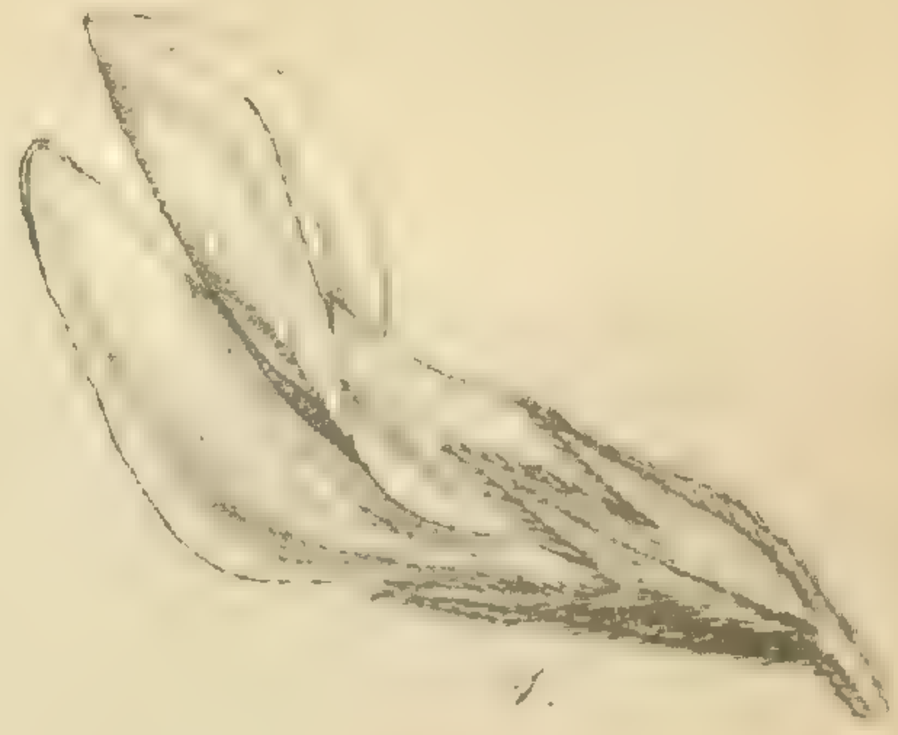
Caule frutescente, ramis diffusis, foliis appresse pilosis virentibus, stipulis ovatis cum acumine, foliis late ovatis v. obovatis obcordatisque, calyce urceolato distincte bilabiato, dentibus lineari-lanceolatis apice setaceis labii superioris longioribus, inferioris dente intermedio lateralibus duplo longiore, carina vexillo obtusiusculo subbreviore alis oblongis breviore. *Webb.*

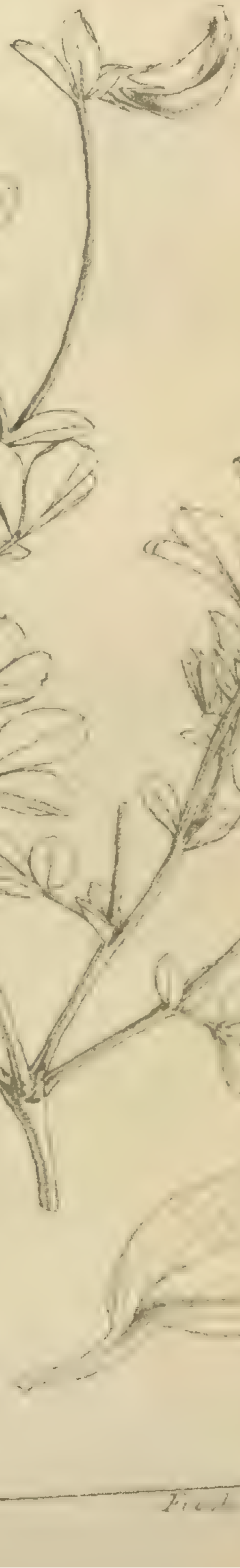
Lotus purpureus. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 119, Tab. VI.

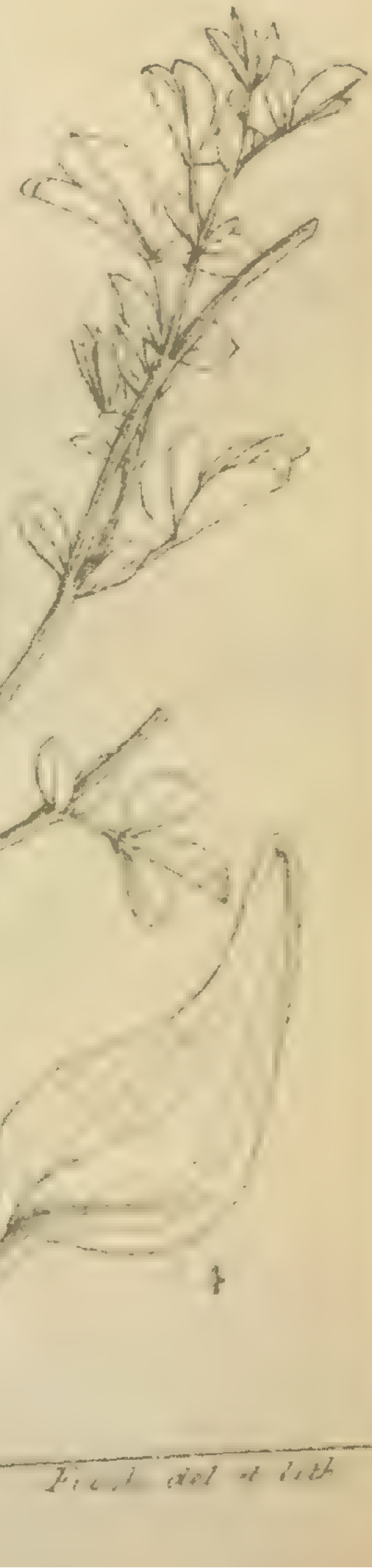
Hab. In fields and among groves of *Euphorbia Tuckerana*, St. Nicholas, one of the Cape de Verd Islands. *Forbes.*

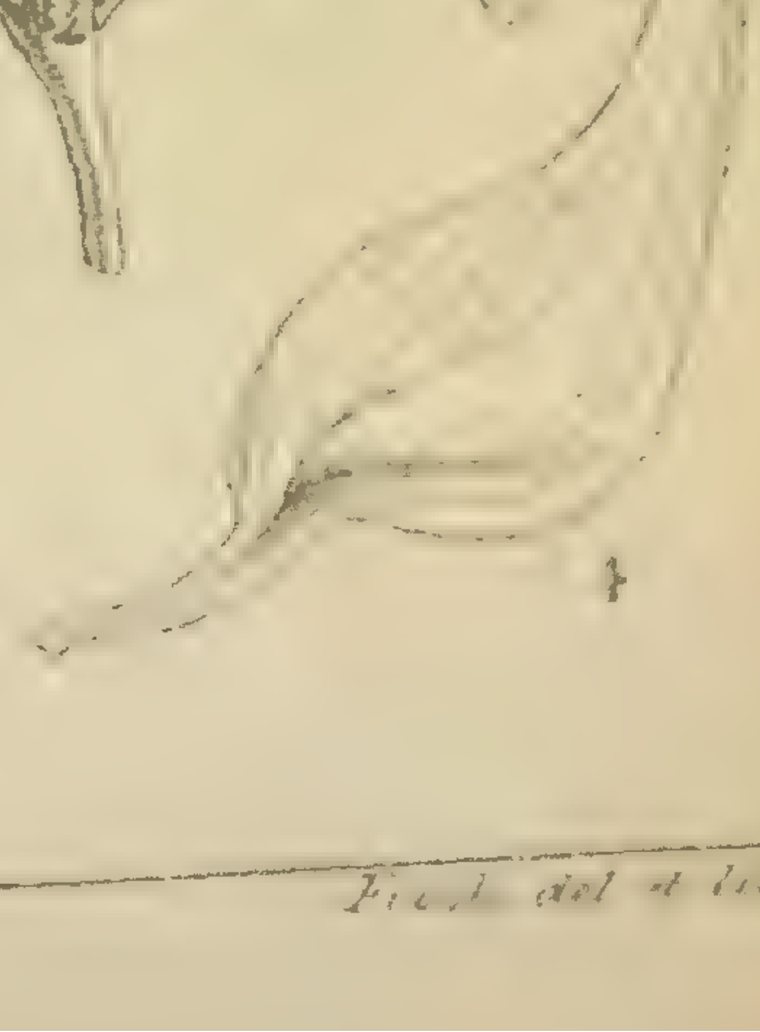
This species, though very distinct, is allied to L. *macranthus*, Lowe, (L. *Portosanctanus*, nob. in Steud. Nomencl.) of which the flowers are pale purple. Those of our plant have the keel and standard rose-coloured, and the wings tipped with deep purple. Some of the leaflets are as much as 4 lines long, by $2\frac{1}{2}$ wide. *Webb.*

Fig. 1. Flower. *f.* 2. Vexillum. *f.* 3. Ala. *f.* 4. Carina. *f.* 5. Ovarium :—*magnified.*









TAB. DCCLVIII.

MICRODESMIS PUBERULA, *Hook. fil. mst.*

GEN. CHAR. MICRODESMIS, *Hook. fil.* gen. nov. Flores dioici. *Masc.*—*Cal.* minutus, 5-partitus. *Petala* totidem, æstivatione contorto-imbricata, crassiuscula. *Stam.* 5-10, 1-2-seriata, seriei exterioris petalis opposita interioribus alternis paulo breviora, omnia sub rudimento pistilli hypogyni inserta. *Antheræ* biloculares filamentis liberis breviores. *Fœm.*—*Calyx* et *petala* maris, sed paulo majora. *Stamina* et *discus* 0. *Ovarium* inferne loculis 2-3 minutis excavatum, cæterum solidum. *Styli* 4, breves, recurvi, papillis stigmaticis elongatis undique plumulosi. *Ovulum* in loculo quoque unicum, ex apice loculi suspensum. *Bacca* exsucca, 2-3-locularis, putamine osseo extus processubus irregularibus cristato-muricato. *Semina* in loculis solitaria, anatropa, integumento . . . ; *embryone* in axi albuminis carnosi recto, cotyledonibus subfoliaceis, facie plana sibi applicitis.—Frutices (?) facie *Caseariæ*, ramis *virgatis, gracilibus.* Folia *alterna, brevi-petiolata, lanceolata, cuspidata, obsolete v. exserte serrulata, penninervia, reticulato-venosa, rigide membranacea, pellucido-punctata !* Stipulæ *minutæ, persistentes.* Flores *in fasciculos aggregati, masculis in fasciculo* 3-12, *fœmineis* 3-4, *his brevius pedicellatis.* Pedicelli *e pulvinulo bracteolarum brevissimarum exserti, nudi.* Flores *minuti.*

Subgen.* I. MICRODESMIS—*Stamina* 5. *Antheræ* muticæ.

Microdesmis *puberula*, Hook. fil.—Tab. nost. DCCLVIII.

HAB. In Africa trop. occid. *Vogel*, in herb. Hook.

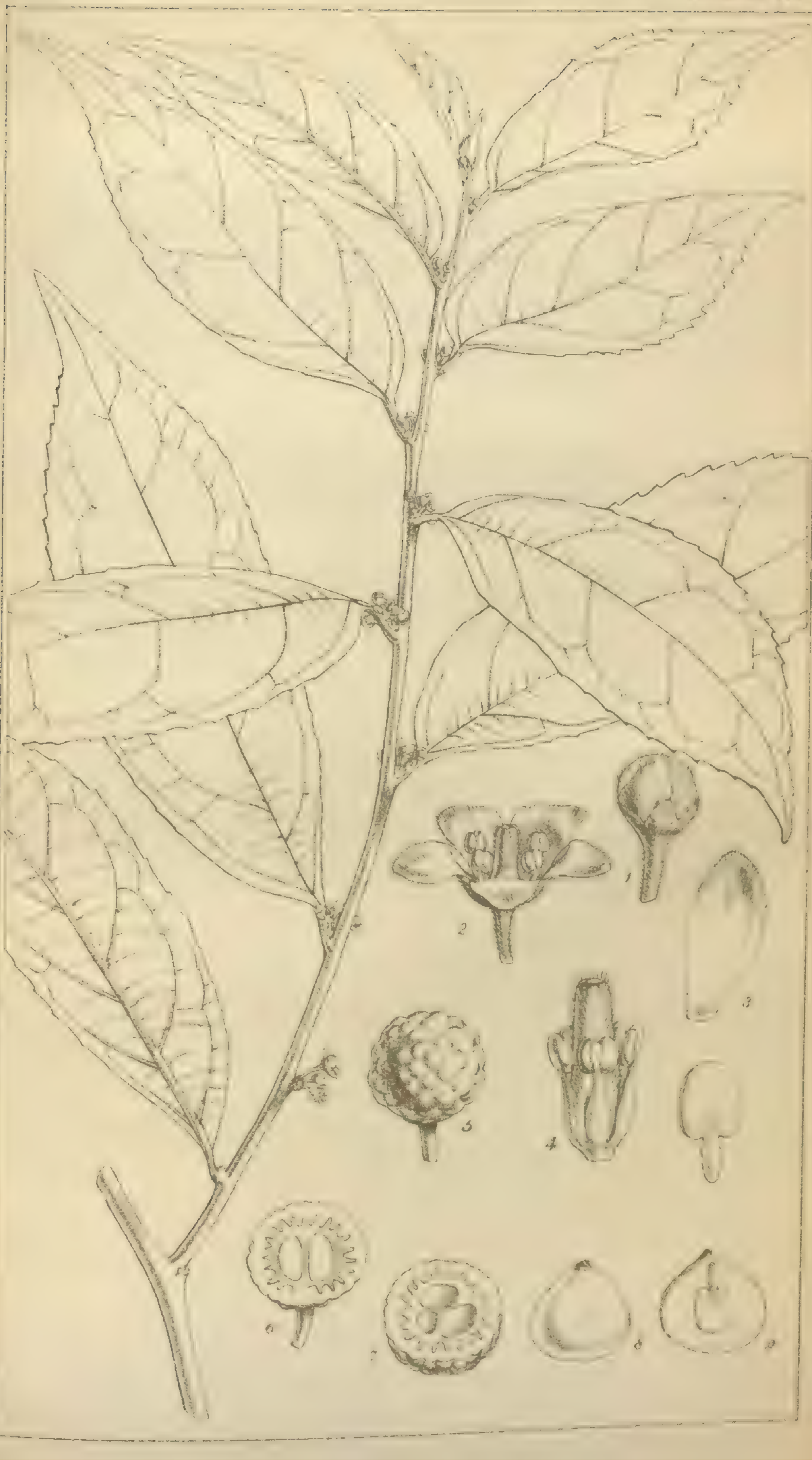
OBS. Affinitas generis cum *Melicyto* arctissima, cum *Kiggellaria* etiam obvia. Utroque generi nostrum accedit habitum, inflorescentia diclinia, calyce et petalis ; ab utroque recedit ovario complete 2-3-loculato et ovulis pendulis ; demum summam characterum affinitatem *Bixinearum, Flacourtianearum, Sumydearum et Euphorbiacearum, Phyllanthearum* signo novo illustrat.

Fig. 1. Alabastrum floris masc. *f.* 2. Flos masc. expansus. *f.* 3. Petalum. *f.* 4. Stamina sub rudimento pistilli. *f.* 6. Bacca verticaliter secta. *f.* 7. Eadem, transverse secta. *f.* 8. Semen. *f.* 9. Idem, verticaliter sectum. Figuræ analyticæ plus minus amplificatæ sunt.—*Planchon.*

* Subgen. II. GANITROCARPUS—*Stamina* 10. *Antheræ* brevi-apiculatæ, extrorsæ.

Sp. 2. M. (Ganitrocarp.) *caseariæfolia*, Planch.

HAB. In insula *Penang*.—Herb. Hook. nec non in ditione Malaccensi, *Griffith* in herb. Lemann.—Singapore ? *Lobb*, n. 337, in herb. Hook.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TAB. DCCLIX.

Cocculus? macranthus, *Hook. fil. ms.*

Scandens, volubilis, ramis petiolis foliisque secus marginem et nervos (supra) dense in disco parce setosis, setis rigidis rufis, foliis longe petiolatis, cordato-suborbiculari-3-5-lobis, lobis infimis rotundatis cæteris breviter et abrupte cuspidatis, nervis 7 e petioli insertione basi limbi subcontigua radiantibus, racemis extra-axillaribus spiciformibus pendulis sparsifloris, masculis interdum ramosissimis, bracteolis ad basim florum fœmineorum subulatis setosis, pedicellis (sub anthesi) subæqualibus, ad basim florum masculorum caducissimis.

Hab. In Insula Fernando Pô, juxta Clarence Peak. *Vogel, in herb. Hook.* Oct. Nov. 1841.

Caules longissimi, vulnerati succum mox brunnescentem fundentes, extremi herbacei, glaucescentes, setis subulatis aridis in sicco innocuis, inæqualibus, patentibus hispidi. *Petioli* sæpius basi torti, teretes, sulcati, 6-8-pollicares. *Lamina* folii 3-4½ poll. longa, 4-6 poll. lata, levissime peltatim affixa, membranacea, inter nervos reticulato-venosa, setis secus nervos præsertim supra longis illis petiolorum brevioribus et adpressissimis. *Racemi* florum fœmineorum e latere et infra insertionem folii dependentes, simplices v. basi furcati, glabri, 2-4-pollicares, tenues, bracteolis persistentibus subpenicillato-setosis ornati. *Flores* juniores (ut in icone) subsessiles demum breviter pedicellati, floribus masculis fere duplo minores, sicut ei, glaberrimi et lutescente-albi (*Vogel*). *Calyx* (in utroque sexu) 6-phyllus, foliolis biseriatis imbricatis. *Petala* 6 concava; staminodia ananthera subulata amplectentia. *Ovaria* 3, approximata; stigmata subsessilia, complanato-triangularia, latere externo rotundato laciniata. *Fructus* . . . . *Racemi* masculi sæpius ramosi, ramis crassis, inferne setosis. *Stamina* 6 filamentis inferne connatis (ex Vogel), ex analysi Miersiana et e meis observationibus liberis. *Antheræ* ex icone transverse bivalves sed loculus certe superficie 4-lobus.

Obs. Huc ob affinitatem cum *Cocculo palmato* (Bot. Mag. t. 2970-1) positus, dummodo genera *Menispermearum* in chaote obscuro remaneant. Mox tamen in genus proprium *Chasmantheræ* proximum,—*Jatrorhiza*, Miers ms.,—erigendus.

Fig. 1. Flos masculus amplificatus et vi expansus. *f.* 2. Tria e staminibus senis. *f.* 3. Flos fœmineus (in natura masculo minor). *f.* 4. Petalum floris fœminei cum staminodio proprio et duobus e petalis adjacentibus. *f.* 5. Pistilla approximata (nec concreta). *Obs.* Flores in icone non plane evoluti, ideoque brevius pedicellati quam sub anthesi. *Planchon.*

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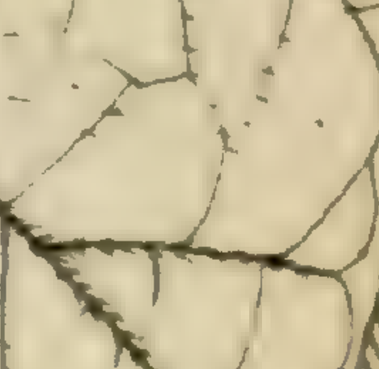

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TAB. DCCLX.

Glyphæa grewioides, *Hook. fil. ms.*

Char. gen. Glyphæa, *Hook. fil. Gen. nov.*—*Calyx* ad basim 5-partitus, laciniis oblongis, æstivatione valvatis, deciduis. *Petala* anguste lanceolata, sessilia, basi nuda. *Stamina* plurima, hypogyna; *filamentis* gracilibus, haud complanatis; *antheris* basifixis, immobilibus, erectis, linearibus, connectivi angusti productione brevissime apiculatis, loculis 2 laterali-introrsis, apice rimula brevi (poriformi) introrsum dehiscentibus. *Ovarium* subsessile, (gynophoro saltem haud conspicuo), in *stylum* apice acuto stigmaticum attenuatum, abortu (?) 3-loculare, *loculis* ad angulum internum superposite pauciovulatis, et inter *ovula* contracto-interruptis, inde in locella superposita, uniovulata divisis. *Fructus* subcapsularis?? (fragmenta ejus tantum video) fusiformi-oblongus, verticaliter pluricostatus; *mesocarpio* crasso, aride-suberoso, *locellis* monospermis paucis (pro carpello singulo 2-3 uniseriatis), *endocarpio* cartilagineo, subindehiscente limitatis; *columella* in fructu forsan non sponte irregulariter fracto in fila soluta. *Semina* ad medium anguli interni locelli cujusvis peritrope inserta, transverse late oblonga, anatropa. *Embryo* in axi albuminis rectus; cotyledonibus semini conformibus, haud crassis, facie plana sibi invicem applicitis, radicula exserta lineari-oblonga versus hilum directa.

Frutex *Africæ occidentalis tropicæ, facie et vegetatione* Grewiæ, *ramis virgatis.* Folia *alterna, disticha, petiolata, lanceolata, cuspidata, remote et inæqualiter repando-serrata v. denticulata, triplinervia, cæterum penninervia, rigide membranacea, glabriuscula.* Stipulæ *caducissimæ, non visæ.* Umbellæ 3-4-*floræ, pedunculatæ, sæpius oppositifoliæ, nunc axillares, basi ebracteatæ,* bracteolis *ad basim pedicellorum caducis.* Flores *lutei.*

Genus distinctissimum, a *Grewia* nequaquam removendum, invito defectu glandularum unguis petalorum et gynophori staminigeri.

Glyphæa *grewioides, Hook. fil. ms.*

Hab. In Sierra Leone (*Vogel, Don*), Insula Fernando-Pô (*Vogel*) et Senegambia, (*Heudelot*, n. 862, *in herb. Hook.*)

Ramuli, petioli, pedicellique pube parca stellata sparsi. Folia variant lanceolata, vel late elliptica, basi subcordata v. acutiuscula. Pedunculi umbellæ 1-2 pollicares. Pedicelli 5-12 lin. longi.

Fig. 1. Flos expansus paulo amplificatus. *f.* 2. Ovarium. *f.* 3. Fructus magnitudine naturali. *f.* 4. Idem transverse sectus. *f.* 5. Idem verticaliter sectus. *f.* 6. Semen. *f.* 7. Idem secundum raphen sectus. *Planchon.*

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TAB. DCCLXI.

Sapota marginata, *Dcne.*

Ramulis glabratis novellis tomentosis, foliis obovatis obtusis supra glabris subtus petiolisque tomentosis marginatis coriaceis dein glabratis, floribus axillaribus paucis glabris, pedicellis petiolum superantibus, foliolis calycinis rotundatis glabris, corollæ laciniis calycem parum superantibus rotundatis ciliolatis, squamis ligulatis obtusis, filamentis dilatatis, ovario superne piloso 6-loculari, loculis uniovulatis. *Decaisne.*

Sapota marginata, *Dcne. apud. Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 169. Tab. XIII.

Hab. Rocky summit of a mountain 2000 feet high; valley of St. Domingo, in St. Jago, one of the Cape de Verd Islands. *J. D. H.*

Only two individuals of this tree (about 20 feet high) were detected in the above-mentioned locality. They yielded one flower and several young fruits. The latter, as well as the branches, abounded in milky juice.

Fig. 1. Flower. *f.* 2. Portion of corolla, stamens and scales. *f.* 3. Ovary:—*magnified.*

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TAB. DCCLXII.

Campanula (medium) Jacobæa, *Chr. Sm.*

Fruticulosa, caule noduloso lignescente cavo, ramis diffusis albidis junioribus fuscis strigoso-hirtis foliosis, foliis spathulato-ovalibus lanceolato-ovatis obtusiusculis strigoso-hirtis subtus pallidis nervosis basi attenuatis caulinis breviter petiolatis superioribus semi-amplexicaulibus, calycis tubo brevi cyathiformi laciniis anguste lanceolatis strigoso-ciliatis, corolla campanulata æquali laciniis 3-plo longiore, filamentis plano-filiformibus basi dilatatis glaberrimis, capsula depressa, seminibus ovatis. *Webb.*

Campanula Jacobæa. *Chr. Sm. in Tuck. Voy. p.* 251. *Webb, Spicil. Gorgon. in Hook. Nig. Voy. p.* 148. Tab. XII.

Hab. Clefts of rocks, on mountains, at an elevation of 1500 to 2000 feet, *Forbes, Darwin, Vogel, J. D. H.*

This varies with the flowers blue or white. *Webb.*

Fig. 1. Stamen. *f.* 2. Pistil;—*magnified.*

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TAB. DCCLXIII.

Phaca Vogelii, *Webb.*

Cinereo-villosa, ramis gracilibus elongatis foliosis decumbentibus, foliis subsexjugis, foliolis parvis ovatis, spicis axillaribus densifloris folio demum subduplo longioribus, floribus exiguis sessilibus, calyce campanulato pilosissimo, dentibus linearibus subæqualibus, corolla calycem vix excedente, legumine minimo inflato elliptico-ovato acutiusculo pilosissimo. *Webb.*

Phaca Vogelii. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 124. Tab. VIII.

Hab. Maritime rocks, St. Antonio, one of the Cape de Verd Islands. *Forbes, Vogel.*

A full description of the present species of a genus, usually inhabiting cooler regions, will be found in the work above quoted, drawn up by Mr. Webb.

Fig. 1. Flower. *f.* 2. Vexillum. *f.* 3. Ala. *f.* 4. Carina. *f.* 5. Ovarium. *f.* 6. Lateral, and *f.* 7. Front view of legume. *f.* 8. Transverse section of ditto:—all *magnified.*

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TAB. DCCLXIV.

Phagnalon melanoleucum, *Webb.*

Fruticulus, ramis tenuibus incurvis tomento pannoso albo vestitis, foliis alternis lanceolatis majoribus sæpe pollicaribus 4 fere lin. latis margine revolutis undulatis in petiolum brevem attenuatis, junioribus sæpe in axillis fasciculatis supra tomento albo araneoso deciduo tectis mox atrovirescentibus subtus albo-tomentosis, pedunculis ad apicem ramorum v. in axillis supremis v. oppositifoliis solitariis v. geminatis 2-3 dichotomis filiformibus tomentosis apice nudis, involucri campanulati glaberrimi nigrescentis squamis 3-serialibus exterioribus ovatis mediis oblongis interioribus linearibus margine scariosis denticulatis apiculatis, capitulis paucifloris heterogamis, floribus omnibus tubulosis, fœmineis pluriserialibus filiformibus 5-dentatis, stylo exserto ramis elongatis obtusis, hermaphroditis sub 8 campanulatis glabriusculis, antheris basi attenuatis ecaudatis, styli ramis exsertis superne claviformibus apice subtruncatis stigmatoso-papillosis, receptaculo angusto, acheniis oblongis subcompressis erostris, pappo albo pilosiusculo florum fœmineorum 3-4-setoso hermaphroditorum 5-setoso. *Webb.*

Phagnalon melanoleucum, *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 136. Tab. IX.

Hab. Mont Verd, St. Vincent, one of the Cape de Verd Islands, from an elevation of 1000 feet to the summit. *Vogel.*

Fig. 1. Hermaphrodite, and *f.* 2. Female flower:—both *magnified.*

TAB. DCCLXV.

Sonchus Daltoni, *Webb.*

Caule brevi crasso lignoso apice foliosissimo, foliis anguste lanceolatis apice attenuatis runcinato-lobatis lobis latis rotundatis denticulatis glabris utrinque viridibus, petiolo basi incrassato coriaceo amplexicauli, caulinis oblongis acutis basi in appendicem rotundato-cordiformem amplexicaulem dilatatis, inflorescentia umbelliformi, capitulis rotundatis, involucri ovato-rhomboidei squamis acutis glabris margine minutissime denticulatis. *Webb.*

Sonchus Daltoni. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 144. Tab. X.

Hab. Cape de Verd Islands; summit of an abrupt hill, 1500 feet of elevation, Valley of St. Domingo, in St. Jago. *J. D. H.* Summit of Mont Verd, Island of St. Vincent, abundant. *Vogel.*

Fig. 1. Flower. *f.* 2. Achenium:—both *magnified.*

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TAB. DCCLXVI.

Rhabdotheca picridioides, *Webb.*

Caule basi suffrutescenti foliorum cicatricibus superne annulato apice subrosulato-folioso, foliis oblongis in petiolum dilatatum amplexicaulem angustatis apice rotundato-obtusis margine spinulosis glaberrimis, scapo longissimo terminali tereti striato glabro fusco apice v. rarius per totam longitudinem ex axillis squamarum floriferis, inflorescentia subramosa, pedicellis squamis sessilibus ovatis acutis margine undulato-scariosis cum involucro continuis densc obsitis, involucri squamis inferioribus brevissimis conformibus ovato-lanceolatisque interioribus elongatis subscariosis capitulum cylindraceum efformantibus, flosculis inferne pilosis, antheris basi caudatis, pappo pluriseriali exteriore simplici interiore denticulato, acheniis elongatis tetragonis angulis obtusis apice vix attenuatis interioribus sublævibus exterioribus squamoso-scabridis. *Webb.*

Rhabdotheca picridioides, *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 146. Tab. XI.

Hab. Cape de Verd Islands; fissures of rocks, San Nicholas. *Forbes.* Mont Verd of St. Vincent, elev. 1000 feet to the summit. *Vogel.*

For some valuable remarks on the genus and its affinities, see Mr. Webb, l. c.

Fig. 1. Flower. *f.* 2. Achenium:—*magnified.*

TAB. DCCLXVII.

Uvaria? Vogelii, *Hook. fil. mss.*

Scandens, glaberrima, foliis breve petiolatis anguste oblongis breviter acuminatis basi leviter complicata cordatis, margine (in sicco) crispulo obsolete repando-integris, supra nitidis subtus glauco-rubescentibus, pedicellis axillaribus (fructiferis in parte inferiore denudata ramulorum) 1-floris folio 7-8-plo brevioribus, floribus minutis, carpellis paucis (abortu?) cylindraceo-oblongis mucronulatis brevissime stipitatis monospermis.

Hab. In Africa occid. trop. secus amnem *Quorra; Vogel,* Novemb. 1841.

Rami flexuosi et hinc inde interdum semel in spiram torti, epidermide nigrescente lenticellis albis crebris sparsa. *Folia* 3-4 poll. longa, 1-1½ poll. lata. *Flores* (quorum fragmenta tantum video) diametro vix 2 lin. *Calyx* repando-trilobus, lobis obtusis, sinubus latissimis. *Petala* 6-biseriata, æstivatione verosimiliter anguste imbricata, exteriora ovata, interiora ovato-lanceolata, obtusa, crassa, glabra. *Stamina* (ex icone analytica inedita cl. *Hook. fil.*) subuniseriata, definita, vix ultra 12. Connectivus antherarum filamento subæqualis, et, sicut illius apex, glandulis conspersus, subquadratus; loculi oblongi, marginales. *Carpella* 3½-4 lin. longa, nigra. *Semen* loculum arcte implens; integumento cartilagineo-fibroso, in laminas 4 verticales ad axim seminis fere conjunctas, et in plicas plures transversales, parallelas, intra albumen corneum producto.

Obs. Pluribus notis a genere recedit; huc igitur, donec meliora specimina innotuerunt, dubitanter posita. Serius, in *Flora Afric. occid.*, in novum genus (*Clethrosperum*) *Oxandræ,* Ach. Rich. affine, fere absque dubio instauranda.

Fig. 1. Flos, magnitudine auctus. *f.* 2. Unum e petalis exterioribus. *f.* 3. Stamen (filamento inferne abscisso). *f.* 4. Sectio verticalis carpelli et seminis. *f.* 5. Eorumdem sectio transversalis. (Septa cruciata quæ in icone perperam delineata sunt pro sectione lamellarum verticalium integumenti seminalis, nec pericarpii, intelligenda). *f.* 6. Frustulum pelliculæ connectivi valde amplificatum, glandulas quibus conspersum est exhibens. *Planchon.*

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TAB. DCCLXVIII.

Sarcostemma Daltoni, *Dcne.*

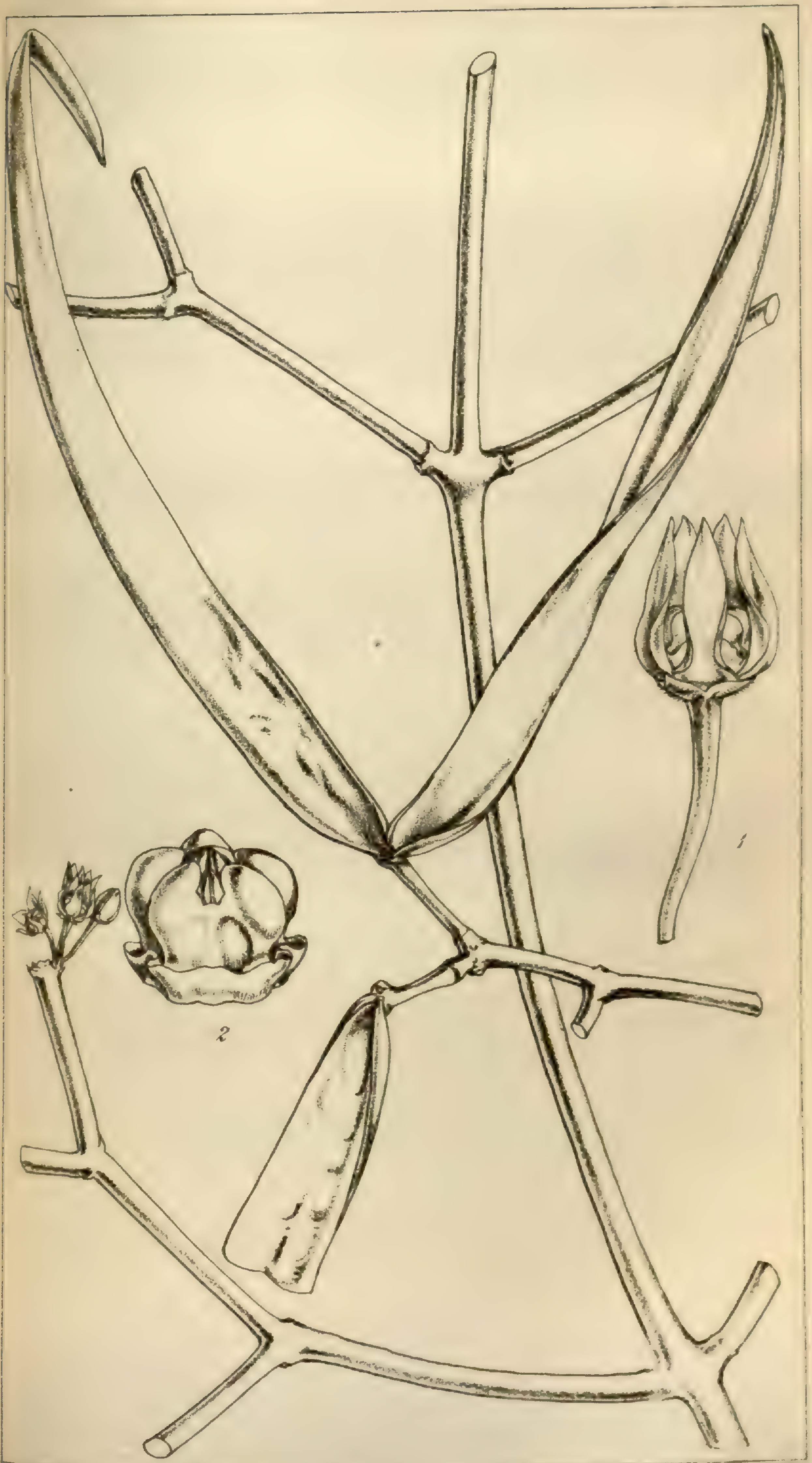
Ramis teretibus aphyllis, umbellis terminalibus, pedicellis glabris, corollæ laciniis ovatis ex oblique acuminatis glaberrimis, coron. staminea ext. plicata sinubus subæqualibus obtusis folior. coronæ int. basin æquantibus, fol. coronæ int. rotundato-ovatis gynostegio incumbentibus, stigmate pentagono medio mamilloso, folliculis lineari-lanceolatis glabris. *Dcne.*

Sarcostemma Daltoni. *Dcne. in Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 149. Tab. XIV.

Sarcostemma nudum. *Ch. Smith, in Hb. Mus. Brit.*

Hab. Hills and maritime rocks, St. Jago one of the Cape de Verd Islands. *Forbes, J. D. H.* San Antonio. *Vogel.*

Fig. 1. Flowers. *f.* 2. Corona:—*magnified.*



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TAB. DCCLXIX—DCCLXX.

Ritchiea erecta, *Hook. fil.*

Erecta, glaberrima, foliis trifoliolatis, foliolis lanceolato-oblongis petiolum subæquantibus, basi in petiolulum breviter attenuatis apice breviter et acute acuminatis, racemis terminalibus brevibus pedicellorum (jam delapsorum) cicatricibus dense obsitis apice demum paucifloris, pedicellis calyci subæqualibus, petalis anguste linearibus lacinias calycinas lanceolatas cuspidatas fere duplo superantibus.

Hab. In Insula Fernando Po, Africæ occid. *Vogel in herb. Hook.*

Frutex 6-pedalis, ramosus. *Rami* lenticellis crebris valde prominentibus asperati. *Petioli* teretes, 4-5 poll. longi. *Foliola* rigide chartacea, supra siccitate atro-fusca, subtus rufescentia. *Nervi* supra obsoleti, subtus prominentes. *Racemus* in specimine 2-pollicaris, cicatricibus pedicellorum spira pluriseriali confertis, et sæpius hinc spinula (stipula ?) stipatis. *Flores* illis *Ritchieæ fragrantis* duplo minores. *Calyx* viridis. *Petala* et staminum filamenta alba. *Antheræ* nigrescentes. *Vogel.*

A *Ritchiea fragrante* differt, caule non scandente, racemo confertifloro, pedicellis gracilibus vix pollicaribus, nec 3-4 pollicaribus, floribus duplo minoribus, et petalis versus apicem non dilatatis, nec in acumen setaceum subcirrhiforme productis. *Planchon.*

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TAB. DCCLXXI.

Psorospermum tenuifolium, *Hook. fil. ms.*

Glabrum, foliis lanceolatis utrinque acuminatis acutiusculis integerrimis rigide membranaceis nitidis, cymis terminalibus pedunculatis foliis 3-4-plo brevioribus, petalis calyce vix duplo longioribus, bacca globosa (grano Piperis majore) sepalis lanceolato linearibus reflexis duplo longiore.

Hab. In Africa trop. occid. secus flumen Nun. *Vogel in herb. Hook.*

Frutex 10-pedalis, ramosus (*Vogel*). Novella, nodis et axillis petiolorum exceptis, glaberrima. *Rami* vetusti cortice cinereo, in longum lineatim fisso vestiti, teretes v. ad nodos compressi. *Ramuli* plus minus manifeste tetragoni, epidermide lævi, sicut planta tota, fusco-rubescentes. *Folia* crebra, 2—2½ poll. longa, 12-15 lin. lata, margine tenui subrevoluto, nervis tenuibus, veniformibus, utrinque prominulis v. supra obsoletis. *Petioli* 1½ lin. longi, supra unisulci, in axillis pulvinulum lanæ brevis fulvæ foventes. *Cymæ* ramus primarius bifurcus v. sæpius sub-umbellato-4-5-divisus, secundariis mox subumbellato-2-4-floris. *Pedicelli* 2½-3 lin. longi, striatuli, a basi ad apicem gradatim crassiores. *Flores* magnitudine illorum *Stellariæ mediæ*. *Petala* intus villosa albido-lutescentia (*Vogel*). *Stamina* ..... *Styli* fere a basi liberi. *Stigmata* capitata. *Fructus* (in vivo) nigrescenti-purpurascens (*Vogel*).

Species a *Psorospermo Senegalensi*, Spach, glabritie statim dignoscenda.

Fig. 1. Flos. *f.* 2. Pistillum. *f.* 3. Fructus magnitudine naturali. *f.* 4. Idem amplificatus. *f.* 5. Idem transverse sectus. *f.* 6. Semen. *f.* 7. Embryo. *Planchon.*

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W. Fitch del.

TAB. DCCLXXII.

Echium stenosiphon, *Webb.*

Caule fruticoso strigoso, ramis fuscis pilis aculeatis strigosis, foliis strigosissimis ovato-vel rhomboideo-rotundatis margine sinuatis acutis vel obtusis inferioribus sinuato-lobatis breviter petiolatis superioribus sessilibus, spicis ramosis foliosis basi nudis apice floridis, floribus densis secundis, bractea oblonga calycis laciniis oblongis vel linearibus subæqualibus longiore, corolla hirsuta cœrulescente calyce 4-plo vel 5-tuplo longiore, tubo cylindraceo ima basi squamarum annulo instructo, fauce vix ampliato lobis brevibus, staminibus exsertis infra medium tubi insertis, stylo staminum longitudine apice glabro sub apice usque ad basin pilosissimo, ovarii lobis angustis acutis glabris. *Webb.*

Echium stenosiphon. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 155. Tab. XV.

Hab. Cape de Verd Islands, San Nicholas, *Forbes.* Mont Verd of St. Vincent at an elevation above 1000 ft. *Vogel.* A shrub two feet high, branched.

Fig. 1. Flower :—*magnified.*

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W. Fitch del

TAB. DCCLXXIII.

Ochtocosmus Africanus, *Hook. fil. ms.*

Rachidibus et pedicellis exceptis glaberrimus, foliis alternis brevissime petiolatis oblongis sparsis cuspidatis, cuspide callis paucis subglandulosis secus marginem instructo, utrinque acutis margine leviter incrassato et revoluto integris v. subrepandis, rigide chartaceis nitidis subtus pallidioribus pulchre et tenuissime venosis, racemis axillaribus 1-3 folio brevioribus, pedicellis fasciculatis petala (subfructu) æquantibus rachidibusque puberulis, petalis (subfructu) induratis calyce plus duplo longioribus, staminibus styloque exsertis.

Hab. In Africa trop. occid. *Vogel.*

Although at first sight this interesting plant might appear to differ generically from the original *Ochtocosmus Roraimæ*, Benth., described on specimens collected by M. Schomburgk in Guyana, a more close inspection shows those differences to be merely specific. The leaves, which have in both the same firm texture and glossy surface, are here scattered on the branchlets instead of being collected rather densely towards their apex: the inflorescence consists of racemose fascicles, not of a subcorymbose panicle: the petals become thicker, and might be called almost woody, a character which, connected with all others, marks out the affinity of both plants with the genus *Ixionanthes*, Jack. The definition of the Order to which both these genera belong will be shortly the object of a separate paper. It suffices now to point out their close connection with *Erythroxyleæ* on one side, and *Bonnetieæ* (a section of *Ternstrœmiaceæ* of authors) on the other.

Fig. 1. Flower, long after fecundation. *f.* 2. A petal with two stamens. *f.* 3. Pistil with the disc and lower parts of the filaments. *f.* 4. The same vertically cut. *f.* 5. Fruit in the persistent flower. *f.* 6. Transverse section of the same. *f.* 7. A seed with the arilliform production of the exostome. *Planchon.*

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TAB. DCCLXXIV.

Acridocarpus corymbosus, *Hook. fil. mst.*

Ramis foliisque glaberrimis, his lenticellis punctiformibus prominentibus sæpius crebre conspersis, illis alternis breviter petiolatis oblongis breviter et obtusiuscule acuminatis subtus reticulato-venosis subcoriaceis, racemis axillaribus et terminalibus brevibus confertifloris, rachide crassa, bracteis parvis acutis eglandulosis pedicellisque (flore pluries longioribus) alutaceo-pubentibus, calycis laciniis obtusissimis glabriusculis, stylis staminibus longioribus.

Hab. In Africa trop. occid. ad Cape Coast. *Vogel in herb. Hook.*

Ramuli teretes, epidermide griseo-fuscescente leviter striatula. *Folia* sparsa, internodiis longiora, oblonga v. elliptica, 1½-2½ poll. longa, 6-15 lin. lata, acumine sæpius brevissimo, basi acutiuscula v. subobtusa, leviter complicata, subtus glandulis paucis maculiformibus, cinereis, orbicularibus, haud magnis hinc inde sparsa. *Nervi* laterales utrinque 7-10, patentes, longe a margine limbi connexi, supra vix conspicui, subtus prominentes et reticulo venarum laxe connexi. *Petioli* 1-2 lin. longi, sæpius torti, supra acute unisulci, eglandulosi. *Racemi* fere omnes axillares, demum vix pollicares, inferne spatio brevi haud floribus sed bracteis 2-3 lanceolatis instructi, cæterum conferte 15-25-flori, rachide a basi versus apicem incrassata, bracteis minutis, post pedicellorum occasum quasi ramentaceo-asperata. *Pedicelli* florum inferiorum 6-8 lin. longi, graciles. *Flores* inaperti, parvi. *Calyx* profunde fidus, lacinia altera glandulis 2 (in unam confluentibus) impressis instructa, laciniis semioblongis v. subrotundis, ciliolatis, tubo brevi pilis sparso. *Petala* non visa. *Antheræ* oblongo-lineares, apice poris 2 apertæ, glaberrimæ. *Filamenta* persistentia, crassa, brevia, glabra. *Ovarium* accretum subobcordato-bilobum, sinu obtusissimo, pilis rufescentibus sericeum. *Styli* a basi liberi, divaricato-arcuati, subulati, glaberrimi, acuti. *Fructus* . . . .

Ab *Acridoc. Smeathmanni*, Fl. Seneg. spicis solitariis brevibus, ab *Acrid. Cavanillesii*, Ad. Juss., laciniis calycinis obtusissimis differt.

Fig. 1. Flos petalis ablatis. *f.* 2. Stamen. *f.* 3. Ovarium:—*Omnia plus minus amplificata. Planchon.*

TAB. DCCLXXV.

Schmidelia monophylla, *Hook. fil. ms.*

Ramis petiolis foliisque subtus pubescentibus, his unifoliolatis obovato-oblongis breviter et acute cuspidatis remote et exserte denticulatis basi cuneatis supra (præter nervum medium) glaberrimis nitidis rigide membranaceis, racemulis confertifloris axillaribus solitariis 1-1½ pollicaribus petiolo parum v. duplo longioribus, floribus sæpe 2-3 pedunculo communi brevissimo sustentis, pedicellis tenuissimis calyci subæqualibus, petalis cuneatis intus villosis calyce staminibusque brevioribus.

Hab. In insula Fernando Pô, ad Clarence. *Vogel in herb. Hook.*

Rami teretes, epidermide cinerea. *Folia* sparsa, internodiis longiora, 2-6 poll. longa, 1½-3 poll. lata, petiolis teretibus supra versus apicem unisulcis, apice leviter refractis, articulatis, pagina supera siccitate fusco-nigrescente, infera conspicue pallidiore, nervis lateralibus utrinque prominulis, subtus ad axillas pilis albis barbatis. Rachis racemi gracilis, hispidula. Bracteæ minutæ, breviter ovatæ, acutæ, bracteolæque lineares, sicut basis sepalorum externorum pilosulæ. Alabastra minuta, oculo nudo glabriuscula, sub lente pilis paucis conspersa.

Species *Schmideliæ Meyeri*, Planch. ms. (Rhus monophylla, *E. Mey. mss. in pl. Drèg. coll.*) affinis, quæ tamen glabritie absoluta et racemis, laxifloris elongatis facile differt.

Fig. 1. Alabastrum. *f.* 2. Flos calyce ablato. *f.* 3. Petalum facie visum.—*Omnia amplificata. Planchon.*

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TAB. DCCLXXVI.

Campylanthus Benthami, *Webb.*

Campylanthus Benthami. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 163.

Campylanthus salsoloides. *Webb, Phyt. Can.* 3, *p.* 126, (quoad plantam Gorgon., non Roth).

Var. *α. glaber*; foliis filiformibus glabris, calycis laciniis glabellis ciliatis. *Webb, Spicil. Gorgon. in Hook. Niger Voy. p.* 163. Tab. XVI.

Campylanthus glaber. *Benth. in DC. Prodr.* 10. *p.* 508 and 596.

Eranthemum salsoides. *Ch. Smith in Herb. Mus. Brit.* (*J. D. H.*)

Var. *β. hirsutus*; foliis planis oblongis, superioribus filiformibus cum ramulis hirsutissimis, calycis laciniis puberulis demum glabrescentibus.

Hab. Cape de Verd Islands. Throughout Mount Gardo, in the island of St. Nicholas. *Forbes.* Summit of a steep mountain, valley of St. Domingo, 1200—2000 feet elev., St. Jago. *J. D. H.* St. Antonio and St. Vincent, elev. 800 feet. *Vogel.*

This species differs from C. *salsoloides*, in having the younger leaves often plane, and very hairy, in var. *α.* more slender, in the spikes being erect, the segments of the calyx lanceolate, ciliated, glabrous or glabrescent, in the thicker tube of the corolla, the lanceolate segments, the longer, more acute anthers, in the more obtuse capsule longer than the calyx, and the black seeds. *P. B. Webb.*

Fig. 1. Flower. *f.* 2. Anthers. *f.* 3. Ovary. *f.* 4. Capsule:—all *magnified.*

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TAB. DCCLXXVII.

Hugonia Planchoni, *Hook. fil. ms.*

Ramis petiolisque ferrugineo-pubescentibus, foliis lanceolato-oblongis cuspidatis utrinque acutis remotiuscule serrulatis glabris nitidis rigide chartaceis pulchre reticulato-venosis, stipulis bracteisque pinnatipartitis laciniis subulatis, cymis axillaribus brevibus 3-5-floris, stylis staminibus longioribus.

Hab. In Africa trop. occid. Sierra Leone. *Afzelius in herb. Mus. Brit.* *Vogel in herb. Hook.* Accra. *Vogel, ibid.*

Species distinctissima et pulcherrima, facie *Smeathmanniæ* referens. *Frutex* scandens. *Cirrhi* in parte inferiore ramulorum alterni, nunc nulli. *Ramuli* angulati, ramique subteretes cicatricibus stipularum albis notati. *Folia* sat conferta, alterna, 3-5½ poll. longa, 10-20 lin. lata, petiolo vix 2 lin. longo. *Stipulæ* ob lacinias subulatas conspicuæ, bracteis conformes. *Sepalorum* pars in alabastro externa subsericeo-rufescens, parte tecta glabra, nitida. *Petala* flava (ex *Vogel*) anguste v. latiuscule cuneata, staminibus stylisque longiora. *Bacca* sicca globosa, *Piso* subæqualis, mucronata, calyci subæqualis.

Fig. 1. Flos parum amplificatus. *f.* 2. Petalum ejusdem *f.* 3. Stamina circa pistillum. *f.* 5. Fructus amplificatus. *f.* 5. Ejusdem, sectio transversa. *Planchon.*

TAB. DCCLXXVIII.

Apodytes Beninensis, *Hook. fil. ms.*

Glaberrima exsiccatione nigrescens, foliis distichis brevissime petiolatis breviter acuminatis acumine obtusiusculo v. emarginato basi acutiusculis margine integro v. subrepando revolutis, fasciculis axillaribus paucifloris, pedicellis gracilibus petala oblongo-linearia haud æquantibus, stylo e basi incrassata filiformi staminibus longiore.

Hab. In Africa trop. occid. ad Cape Palmas. *Vogel*, n. 46.

This species is very distinct by its inflorescence from the original *Apodytes dimidiata*, as well as from *A. acutifolia*, Hochst., and two other undescribed species in Sir William Hooker's Herbarium. The section of *Olacineæ* to which Mr. Bentham has justly referred this genus, will be increased by several genera, new or already known; and I may mention, among the latter the *Pennantia*, Forster, referred, upon no good ground, by M. Reisseck to the Order *Terebinthaceæ*.

Fig. 1. Flower before expansion. *f.* 2. Stamen. *f.* 3. Ovarium in the calyx. *f.* 4. Ovarium with part of the style vertically cut. *f.* 5. The same cut transversely. *f.* 6. One of the two ovules, which ought to be represented in the inverse position, as in *f.* 4. *Planchon.*

TAB. DCCLXXIX.

Cleistanthus polystachyus, *Hook. fil. ms.*

Char. Gen.—*Flores* dioici. *Masc.* *Calyx* 5-partitus, laciniis late-linearibus, æstivatione valvatis, demum patentibus, crassiusculis. *Squamulæ* 5, lineari-oblongæ, laciniis calycinis alternæ, hypogynæ. *Stamina* 5, squamulis alterna; filamentis inferne in columnam crassam connatis, superne liberis, subulatis; *antheris* oblongis, supra basim dorso affixis, vacillantibus, loculis 2, rima introrsa dehiscentibus. Rudimentum pistilli, intra stamina insidens, ovato-oblongum, apice trifidum, villosum. *Fœm.* desiderantur.

Frutex ? *Africæ tropicæ occident.; ramulis crebris, alternis.* Folia *approximata, disticha, breviter petiolata, oblongo-lanceolata, apice acuminata, basi acuta, integerrima, glaberrima, rigida, penninervia, reticulato-venosa.* Stipulæ *foliorum caducissimæ, non visæ, florales caducæ, lineari-subfalcatæ, ob glabritiem secus rachides subtomentosas conspicuæ.* Racemi (masculi) *axillares, crebri, nunc, foliorum casu, secus ramulos vix interrupte conferti et inde in racemum compositum confluentes.* Flores *brevissime pedicellati, 2-3-natim fasciculati, fasciculo quoque bracteis 2 (stipulaceis) stipato;* pedicellis *basi articulatis, sicut rachides et perianthia extus, pube densa, ferruginea indutis.*

Cleistanthus polystachyus, Hook. fil. ms.

Hab. In Sierra Leone. *Whitfield in herb. Hook.*

Ob flores fœmineos ignotos affinitas generis subdubia. Ad *Briedeliam* inter *Euphorbiaceas* accedit, æstivatione et characteribus essentialibus, sed differt forma perianthii; attamen ab hoc genere verosimiliter haud removendum.

Fig. 1. Alabastrum. *f.* 2. Flos expansus. *f.* 3. Squamulæ. *f.* 4. Rudimentum pistilli.—*Partes omnes plus minus amplificatæ. Planchon.*

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TAB. DCCLXXX.

Natalia paullinioides, *Planch.*

Foliis cum impari 7-10-jugis, foliolis oppositis v. passim alternis petiolulatis lanceolatis breviter cuspidatis utrinque acutis glabriusculis (nervis subtus tantum pilosulis) remote serrulatis serraturis incurvis supra siccitate nigrescentibus subtus pallidis, racemo oppositifolio pedunculato plurifloro, bracteis parvis subulatis, pedicellis calyce brevioribus vel eum subæquantibus, petalorum lamina linearioblonga cristulis parvis basi ornata v. nuda, ungue (pro parte) sericeo-albido, stylo inferne piloso staminibusque exsertis.

Hab. In Sierra Leone. *Vogel*, n. 99, *in herb. Hook.*

Frutex (verosimiliter scandens) facie *Paullinieæ*. *Ramuli* petiolique communes rachidesque racemi sulcati et pube detersibili primum hinc inde sparsi, demum glabrati. *Stipulæ* in unam intra-axillarem brevem, ovatam, dorso sericeam concretæ. *Racemus* 7-pollicaris, inferne nudus, medio cicatricibus pedicellorum notatus, apice confertiflorus. *Flores* illis *Æsculi Hippocastani* minores, leviter irregulares. *Calyx* profunde 4-fidus; lacinia infera (antica) apice bidentata (e 2 concretis constans.) *Petala* 5 æstivatione imbricata, infimo emarginaturæ laciniæ infimæ calycis respondente, inde sepalis 2 connatis alterno, cæteris angustiore. *Stamina* 4. *Filamenta* basi dilatata, duorum petalorum infimorum connata, 2 lateralium libera. *Glandula* carnosa, brevis, sepalo postico opposita, propter stamina externa. *Ovarium* 4-loculare, pilis rufis vestitum. *Stigma* pyramidato-truncâtum.

Space is wanting to enlarge upon the description, the symmetry of floral parts, and the affinity of this remarkable plant. This will be done shortly in a paper on the Order of *Meliantheæ*, to which this and *Bersama* are to be referred. It is worthy of note that the original species of *Natalia* is a native of Port Natal, and consequently of the subtropical region of the South African flora.

Fig. 1. A bud, side view. *f.* 2. Flower. *f.* 3. The same, with only the stamens, pistil, gland, lower petal and one of the posterior petals. *f.* 4. Stamens, glands and pistil, back view. *f.* 5. Gland. *f.* 6. Ovarium, vertically cut. *f.* 7. Stigma:—*all more or less magnified. Planchon.*

TAB. DCCLXXXI.

Uncaria Africana, *Don.*

Ramis tetragonis foliisque glabris, his breviter petiolatis oblongis v. subovatis acuminatis basi obtusis integerrimis v. hinc inde denticulatis rigide chartaceis siccitate fuscis v. fusco-atris subtus fuscis (pallidioribus), capsulis in capitulum terminalem amplum collectis, pedicellis unguicularibus parum longioribus et cum eis pilis detersibilibus adpressis sericantibus v. subglabratis, seminum cauda altera indivisa, altera bicruri.

Uncaria Africana, *Don, Syst. vol.* 3, *p.* 471.

Hab. In Afric. trop. occid. Sierra Leone. *Don in herb. Soc. Hort. Lond. Vogel*, n. 117, *in herb. Hook.*

Rami juniores acute tetragoni, epidermide nigro-purpurascente nitida. *Unci* juniores in ramulis sterilibus breves, spiniformes, vix curvati, pungentes, adulti crassi, petiolis duplo longiores. *Folia* 3-4 poll. longa, $1\frac{1}{2}$-3 lata; nervi laterales utrinque 5-7, facie utraque prominuli. Capitula longe pedunculata, multiflora. *Capsulæ* plurimæ ventricoso-fusiformes, basi sensim attenuatæ, apice calyce cyathiformi 5-dentato, circiter 2 lin. longo coronatæ, valvis dorso pluricostato sulcatis, endocarpio, more generis, in laminas cartilagineas glaberrimas soluto. *Semina* numerosissima, oculo nudo scobiformia, nucleo subgloboso, caudis paleaceis argenteo-nitentibus, utraque ultra lineam longa.

Fig. 1. Capsula semi-aperta magnitudine naturali, (calycis limbo nimis magno.) *f.* 2. Eadem, valva altera ablata, endocarpii lamina, collumellaque bipartita exhibitis. *f.* 3. Capsula immatura. *f.* 4. Semina amplificata. *Planchon.*

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TAB. DCCLXXXII—III.

Gardenia Vogelii, *Hook. fil. ms.*

Inermis glaberrima, foliis oblongis breviter cuspidatis cuspide acuto v. obtuso basi acutis v. breviter cordatis (in eodem ramo) margine integro repandis rigide membranaceis subtus pallidioribus, stipulis in vaginam brevem sæpius hinc hiantem concretis, floribus terminalibus solitariis sessilibus, corollæ tubo gracili superne leviter ampliato, limbi 5-partiti laciniis late linearibus, stylo et staminibus haud exsertis, bacca (sicca, immatura) cylindraceo-fusiformi limbo calycis tubuloso apice 5-dentato pluries longiore.

Hab. In Afric. trop. occid., loco dicto Ibu, *Vogel*, n. 58, *in herb. Hook.*

Folia 6-10 poll. longa, 2-3½ poll. lata, si basi cordata, brevissime petiolata, si ibidem acuta petiolo 5-8 lin. longo sustenta, reticulato-venosa, venis nervisque lateralibus utrinque prominulis. *Flores* 6-7 poll. longi, albi (ex *Vogel*); tubo corollæ limbum calycis tubulosum pluries superante, laciniis tubo 3- v. sub 4-plo brevioribus. *Genitalium* structura in icone desideratur, in flore unico suppetente semicollapso haud rite inquirenda. *Bacca* (sicca) crassitie digitis sed matura verosimiliter crassior, structura interna mihi ignota.

So long as the limits of the genera *Gardenia* and *Randia* remain loosely defined, this may rank in the former, where Dr. Hooker has placed it. As a species, it appears to be very distinct.

Fig. 1. Fruit, not ripe. *Planchon.*

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TAB. DCCLXXXIV.

LEUCOMPHALOS CAPPARIDEUS, *Benth. ms.*

CHAR. GEN. LEUCOMPHALOS, *nov. gen.*—*Calyx* basi bracteolis 2 stipatus, clausus, in valvas 2 (?) demum rumpens. *Petala* 5, inæqualia, in alabastro subsessilia, superius (vexillare) late ellipticum, æstivatione lateralia leviter amplectens; lateralia (alaria) subdimidiato-oblonga superiore angustiora, margine antico induplicata, propter inferiora exteriora, inferiora (carinalia) lateralibus subconformia, margine antico altero alterum tegente, marginibus posticis induplicatis. *Stamina* 10, hypogyna, subæqualia, libera, filamentis brevibus, antheris longis, linearibus, basifixis, loculis *2* rima introrsa dehiscentibus. *Ovarium* stipitatum, in stylum eo subæqualem attenuatum, uniloculare, ad suturam ventralem biseriatim 6-ovulatum. *Stigma* oblique terminale, semilunatum. *Legumen* stipitatum, oblique semi-orbiculatum, subfalciforme, abortu monospermum, in valvas 2 dehiscens. *Semen* medio suturæ leguminis affixum, transverse oblongum, funiculo brevi, crassissimo, fungoso, papilloso, arillum valde incompletum sistente, testa crustacea, micropyle hilo admota. *Cotyledones* (ex icone rudi Vogeliana) semi-ellipsoideæ, facie plana sibi invicem applicitæ, commissura diametro seminis breviori respondente. *Radicula* . . . . . .

Frutex *Africæ trop occid., inflorescentia excepta, glaberrimus,* ramis *gracilibus.* Folia *alterna, unifoliolata, petiolo gracili apice leviter subgeniculato sustensa, oblongo-elliptica, acuminata, margine integro siccitate subundulata, reticulato-venosa, rigide chartacea, nitida.* Stipulæ *minutæ, triangulares, sphacelatæ, pleræque caducæ.* Paniculæ *terminalis interdum depauperatæ rami breves, racemiferi, fructiferi plus minus incurvi, pilis Malpighiaceis cinerascentes.* Bracteæ *minutæ, ovatæ, ad basim pedicellorum persistentes, bracteolis calycinis subconformes.* Flores *breviter pedicellati, mediocres, albi.*

Leucomphalos capparideus, *Benth. ms.*

HAB. In insula Fernando Pô. *Vogel,* n. 264, *in herb. Hook.*

Calyx et fructus *Swartziæ,* stamina, folia et inflorescentia *Zollerniæ,* ideoque genus inter *Swartzieas* collocandum. *Planchon.*

Fig. 1. Calyx, *leviter amplificatus.* *f.* 2. Flos (incuria pictoris male delineatus). *f.* 3. Stamen. *f.* 4. Ovarium. *f.* 5. Legumen, *magnitud. naturali.*

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TAB. DCCLXXXV—VI.

Oxyanthus formosus, *Hook. fil. ms.*

Glaberrimus, exsiccatione rufescens, foliis magnis breviter petiolatis oblongis breviter acuminatis acutiusculis basi obtusis v. leviter cordatis, stipulis lanceolatis petiolo subtriplo longioribus, corymbis axillaribus multifloris ebracteatis, pedicellis calyce 3-4-plo longioribus, limbo calycis urceolato breviter et acute 5-dentato, corollæ tubo longissimo lacinias limbi lineares 4-7-plo superante, antheris semiexsertis breviter apiculatis.

Hab. In Africa trop. occid. Cape Palmas. *Vogel*, n. 24 *in herb. Hook.*

Caulis subherbaceus, erectus, subsimplex. (*Vogel.*) *Rami* tetragoni. *Folia* majora 8-10 poll. longa, 2½-3 poll. lata, petiolis crassis, vix 2-4 lin. longis, supra late canaliculatis. *Nervi* laterales utrinque circiter 6-9, arcuati, subtus venis laxis connexi. *Corymbus* lateralis, spatio brevi inferne nudus, mox ramulos laterales, alternos, breves, unilateraliter bi-trifloros agens. *Pedicelli* circiter semipollicares, calyce 3-4-plo longiores. *Calycis tubus* subpyriformis, limbo parum longior. *Corollæ tubus* gracilis, 4-5 poll. longus. *Antheræ* infra faucem corollæ subsessiles, lineares, apiculo brevi terminatæ. *Ovarium* biloculare; placentis superficie tota multiovulatis. *Stylus* basi annulo epigyno cinctus, et in fovea apicis ovarii immersus, longe filiformis, tubum corollæ subæquans, haud exsertus. *Stigma* fusiforme, acute bifidum. *Fructus* . . . .

Ex characteribus datis a speciebus descriptis facile distinguendus. *Planchon.*

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TAB. DCCLXXXVII.

NAUCLEA PLATANOCARPA, *Hook. fil.* (sub *Platanocarpo Africano.*)

Glaberrima, ramis tetragonis, foliis anguste obovatis acuminatis basi sæpius acutiusculis integris rigide membranaceis exsiccatione fuscescentibus subtus pallidioribus, petiolis longiusculis gracilibus, stipulis (paris superni foliorum) ovato-oblongis acuminatis, capitulis breve pedicellatis terminalibus solitariis, antheris e sinubus corollæ breviter exserto-reflexis, stigmate extinctoriiformi-cylindraceo, fructibus in syncarpium globosum superficie areolatum confertissime condensatis et subconcretis.

HAB. In Africa trop. occid. Allah, secus amnem Quorra s. Niger; Acra. *Vogel in herb. Hook.* Pandiaki (prædiolum). *Ansell, ibid.*

Arbor 30-40-pedalis (*Vogel*). *Folia* 1½-3 poll. longa, circiter dimidio lata, petiolis 6-8 lin. longis. *Stipulæ* supremæ (cæteras caducas non vidi) 6-8 lin. longæ, 3-4 latæ. *Capitula* florida, si corollarum partem exsertam excipias, mole Cerasi, calycibus confertissimis, bracteolis paleiformibus, clavato-tetragonis, eis longioribus interspersis. Calyces a sese invicem plane liberi. *Corollæ* liberæ, primum albæ, demum lutescentes (*Vogel*), hypocrateriformes, limbo 5-partito tubo multo breviore, laciniis lineari-oblongis, marginibus involutis. *Faux* leviter barbata. *Antheræ* oblongo-lineares, albidæ. *Styli* longe exserti. *Stigmata* semilineam longa. *Fructus* in syncarpium illum *Platani* referens durissimum conferti; attamen immersione in aqua calida facile solubiles, apice incrassati, lignosi, cæterum membranacei, biloculares. *Semina* plurima, minuta, rubra, funiculis pulposis sustensa, ascendentia.

An sit *Nauclea Africana*, Willd., an non, ex descriptione non patet; attamen obstant capitula breviter pedunculata, nec sessilia, et receptaculum nullo modo pilosum. A *Nauclea Africana*, DC. (quoad synonymon *Cephalanthi Africani*, Reichenb.) differt: foliis longius petiolatis, basi acutioribus, bracteisque latioribus.

Fig. 1. Flos cum bracteolis 2. *f.* 2. Idem paulo post anthesim. *f.* 3. Calyx: — *partes omnes plus minus amplificatæ. Planchon.*

TAB. DCCLXXXVIII—IX.

Milletia macrophylla, *Benth.*

Foliolis 11-15 oblongis subtus ferrugineo-pubescentibus, stipellis subnullis, racemo elongato thyrsoideo ferrugineo-tomentoso, calycis ore truncato vix dentato, vexillo alisque extus glabris, carina apice villosa, filamento vexillari hinc ad medium tubo stamineo cohærente, legumine tomento brevissimo rufo-sericeo.

Hab. In Fernando Pô. *Vogel in herb. Hook.*

Leaves one to two feet long; leaflets opposite, 3 to 5 inches long, 1½ to 2½ broad, shortly acuminate, the primary veins diverging from the midrib, regular, parallel and prominent, as in most, if not all species of the genus. Stipella reduced to minute tubercles, or entirely wanting. Flowers larger than in the other species; the petals thick, and all but the keel smooth. Pod linear or linear-lanceolate, narrowed at the base, flat, woody, both margins, especially the sutural one, thickened, usually three or four-seeded.

Notwithstanding the coherence of the tenth stamen, we have no hesitation in referring this plant to *Milletia*, an Asiatic and African genus, numerous in species, including the two which Hochstetter has endeavoured to distinguish under the name of *Berrebera*. The pod, of all the species where it is known, is intermediate between that of the shrubby *Tephrosia*, of the section *Mundulia*, and that of *Sphinctolobium*; the valves adhere closely round the seeds till perfect maturity, when the pod in drying up appears to open in two valves. *G. Bentham.*

Fig. 1. Wing of corolla. *f.* 2. Keel. *f.* 3. Stamens and pistil. *f.* 4. Pistil:—*magnified.*

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TAB. DCCXC—XCI.

Afzelia bracteata, *Vogel.*

Foliolis 3-4-jugis oblique oblongis vix acuminatis obtusis retusisve, petali ungue calyce triplo longiore.

Hab. Gathered by *Heudelot* in rocky situations on the banks of streams in the Foata Dhiallon, and by *Vogel* in Sierra Leone.

A tree, according to Heudelot, of 12 to 15 feet in height, with pendulous branches and brilliant scarlet flowers. In character, it very much resembles *A. Africana*, having the same smooth foliage, canescent inflorescence, and form and arrangement of flowers; but the leaves are very much smaller and more compact, the common stalk rarely 5 inches long, and the leaflets barely 3 inches; the ovate bracteas and bracteolæ (3 to 4 lines long) often persist long after the flowers are opened, and the flowers themselves are very much larger, the claw of the petal when fully developed being above an inch long. The pod is unknown. *G. Bentham.*

Fig. 1. Flower. *f.* 2. Pistil:—*magnified.*

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TAB. DCCXCII.

Chailletia floribunda, *Planch.*

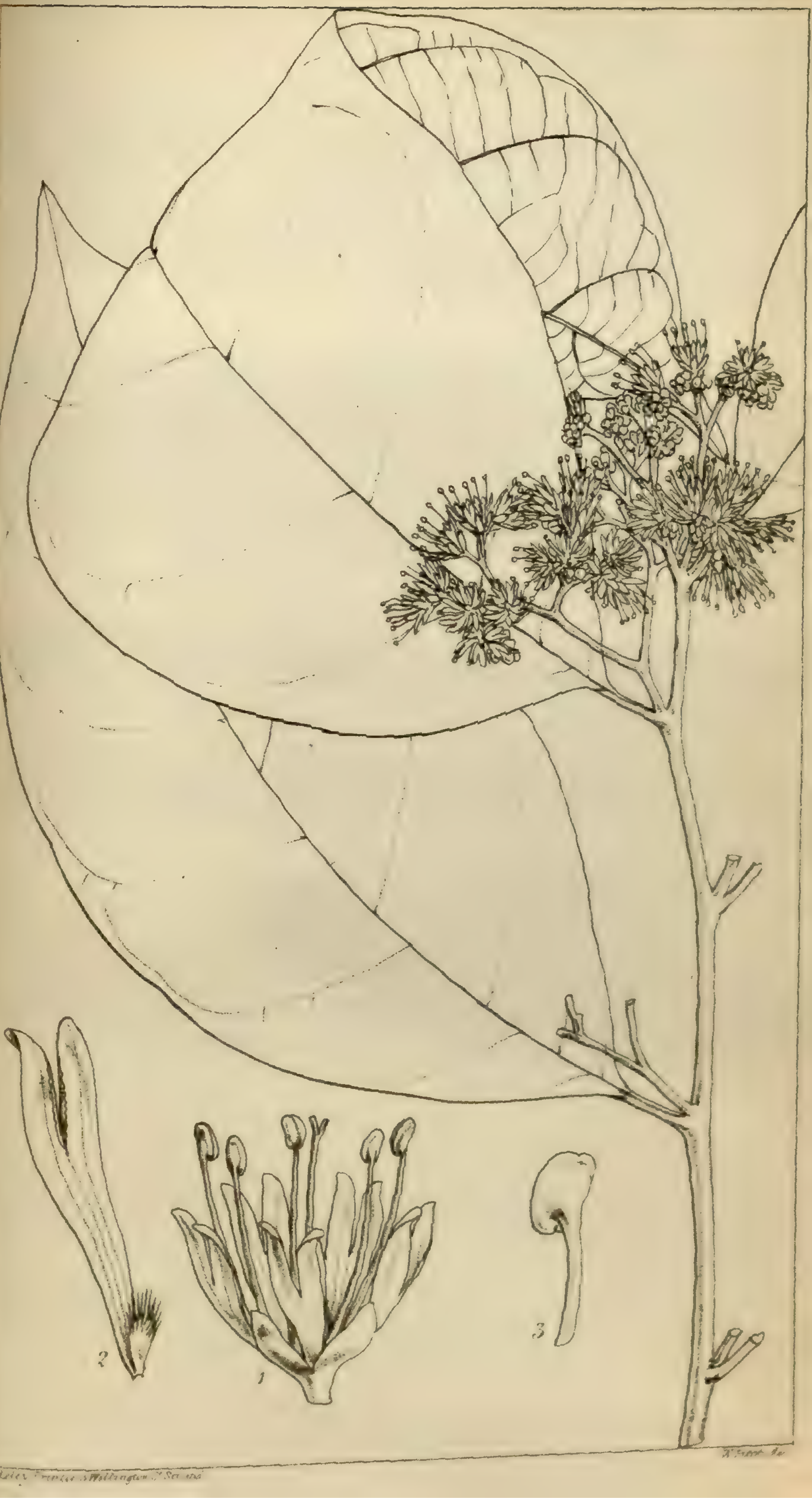
Ramis pube brevissima cinereis, foliis magnis oblongis breviter acuminatis utrinque acutis obsoletissime subrepando-denticulatis v. integerrimis glaberrimis reticulato-venosis rigide membranaceis, cymis axillaribus multifloris breviter pedunculatis petiolo pluries longioribus calycibusque subsericeo-cinereis, staminibus longe exsertis petalisque glaberrimis, stylo inferne piloso staminibus subæquali.

Hab. In insula Fernando Pô. *Vogel,* n. 175, *in herb. Hook.*

Ramuli graciles, obtuse angulati. *Folia* 6-9 poll. longa, $2\frac{1}{2}$-$3\frac{1}{2}$ poll. lata, petiolo semipollicari costaque media subtus prominente nigro-rubescentibus, pilis parcis interdum sparsis. *Cymæ* crebræ, supra basim bifidæ, ramis iterum conferte divaricato-divisis. *Pedicelli* vix 1 lin. longi, medio articulati. *Bracteolæ* subulatæ, minutæ, deciduæ. *Flores* illis *Corni rubræ* subæquales. *Calyx* 5-partitus, laciniis linearibus obtusiusculis, æstivatione leviter imbricatis. *Petala* unguiculata, calyce subduplo longiora, limbo ungue longiore bipartito, laciniis linearibus. *Stamina* petala conspicue superantia. *Filamenta* filiformia, recta. *Antheræ* hippocrepidiformes connectivum securidiforme marginantes, minutæ. *Ovarium* tomentosum. *Stylus* filiformis, basi sensim crassior, apice brevissime bifidus, laciniis leviter inæquilongis apice subincrassato stigmaticis.

Ex characteribus datis ab omnibus speciebus notis est distinctissima.

Fig. 1. Flos. *f.* 2. Petalum cum squamula basilari. *f.* 3. anthera.—*Omnia amplificata. Planchon.*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TAB. DCCXCIII—IV.

Anthocleista Vogelii, *Planch.*

Glaberrima, foliis amplis obovato-oblongis obtusiusculis v. subacutiusculis v. subacutis basi longe cuneatis margine leviter revoluto subrepandis utrinque impresso-punctatis, petiolis brevibus basi auriculatis, aculeis supra-axillaribus geminatis, corolla calyce 3-plo longiore, limbo 15-partito tubo subæquali, bacca (immatura) ovoideo-obtusa.

Hab. In Africa trop. occid. Ibu. *Vogel*, n. 51, *in herb. Hook.* Quorra, Allah. *Vogel*, n. 43, *ibid.*

Frutex v. arbor 20-30-pedalis, in aquis crescens (*Vogel*). *Folia* in ramulis sterilibus approximata, fere pedalia, supra medium 4-5 poll. lata, costa media valida subtus acute prominente, nervis lateralibus utrinque circit. 10, ad marginem productis, nec inter se connexis, venis 0. *Petiolus* 6-8 lin. longus, trigonus, inferne cum opposito margine semicirculari connexus, utrinque auricula semiovata appendiculatus. *Aculei* 2, paulo supra insertionem folii cujusque, a petiolo plane discreti, (non stipulares), basi subconfluentes, validi, nitidi, 3 lin. longi. *Panicula* terminalis brachiata, nuda, ramis compresso-subancipitibus, extremis pedicellisque crassis subtetragonis. *Bracteæ* breves, geminatim connatæ, parte libera subtriangulari, breviter acuminata, acuta. *Pedicelli* etiam sub fructu vix ultra 2 lin. longi. *Flores* illis *Punicæ Granatum* subæquales, brunneo-lutei (*Vogel.*) *Laciniæ* calycinæ 4, subrotundæ, obtusissimæ, margine anguste membranaceo erosulæ. *Corollæ* lobi in gyrum obliquum imbricati, singuli subdolabriformi-oblongi. *Stamina* 15, corollæ lobis alterna ! et paulo infra faucem inserta, filamentis supra medium connatis, *antheris* linearioblongis. *Ovarium* disco annulari adnato cinctum, 4-loculare! placentis medio duorum septorum geminatim opposite affixis, e lamina constantibus peltata, marginibus involuta, facie convexa ovulis creberrimis tecta. *Bacca* immatura ovo gallinaceo multo minor, pulpa in qua semina nidulantur in segmenta 4 solubili. *Semina* . . . .

Fig. 1. Flos paulo ante expansionem. *f.* 2. Idem expansus ; *magnitud. natur. f.* 3. Duo e staminibus amplificatis. *f.* 4. Pistillum, disco insidens. *f.* 5. Ejusdem sectio transversa. *f.* 6. Fructus immaturi sectio transversa. *Planchon.*

TAB. DCCXCV.

Usteria Guineensis, *Willd.*

Usteria *Guineensis*, Willd. Alph. DC. in DC. Prod. 8, p. 22.
Rondeletia loniceroides ! Don, Syst. vol. 3, p. 516.
Hab. In Guinea; *Isert* et *Smeathmann*, ex Alph. DC. In Senegambia. *Perrot. et Leprieur*, ex DC. *Heudel.* n. 597, *in herb. Hook.* Sierra Leone, *Don in herb. Soc. Hort. Lond.*

It would be superfluous to add any thing to the description of the plant as given in De Candolle's *Prodromus.* A figure, however, will not be out of place, since the original one given by Willdenow is contained in a work which is not common in libraries, and besides, must be unsatisfactory. The synonym of *Rondeletia loniceroides*, Don, is given on the author's own authority, that is, after an authentic specimen; else it were impossible to guess that a plant described with five segments to the corolla, and as many stamens, could be the same as one with a four-cleft corolla and one stamen, which is the case in *Usteria*.

Fig. 1. Flos paulo ante expansionem. *f.* 2. Idem expansus (sub anthesi). *f.* 3. Ovarium. *f.* 4. Idem verticaliter sectum.—*Partes omnes amplificatæ. Planchon.*

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TAB. DCCXCVI.

CODONANTHUS ? ALTERNIFOLIA. *Planch.*

Foliis alternis petiolatis oblongis acute caudatis basi subcuneata obtusiusculis margine integro siccitate subundulatis rigide membranaceis penninerviis glaberrimis, fasciculis axillaribus sessilibus 3-5-floris, pedicellis unguicularibus bracteolis subulatis sepalisque exterioribus pube adpressissima plus minus sericantibus, corollæ lobis extus in parte æstivatione inflexa canescentibus, stylis longe supra medium connatis.

Wilberforcia, gen. nov. *Hook. fil. ms.*

HAB. In Sierra Leone. *Don in herb. Soc. Hort. Lond.* (absque nomine.)

Although obliged to adopt a new specific name for this very interesting plant, I strongly suspect it to be the same as *Codonanthus Africana*, Don, in the idea that this latter has been described from memory, and that its supposed opposite leaves are attributed to it by mistake, and the subsagittate bracteæ are nothing more than the external sepals of the plant here figured. At all events, I have hardly any doubt that this is a real *Codonanthus;* and it will not be unnecessary to complete or correct, according to its structure, what the original generic character leaves doubtful or erroneous. The essential characters of *Codonanthus* may stand as follows:

Calyx 5-phyllus, foliolis externis cordato-ovatis, multo majoribus, internas occultantibus. *Corolla* tubuloso-urceolata, tubo brevissimo, limbo apice quinquelobo, lobis brevibus obtusissimis, æstivatione plicatis, vix contortis. *Stamina* 5, apice tubi corollæ (brevissimi) inserta, inclusa, antheris oblongis, bilocularibus, rimis longitudinalibus 2 dehiscentibus, æstivatione inversis. *Ovarium* ovatum, basi disco annulari adnato cinctum, incomplete biloculare, ovulis e basi loculi cujusque 2, erectis, anatropis, semiseptis oppositis. *Styli* 2, inæquales, interne longe concreti. *Stigmata* capitata.

Frutices (v. arbores) *Africæ tropicæ occid., foliis alternis (vel oppositis?) oblongis, exstipulatis; fasciculis axillaribus, pauciflоris; pedicellis basi conferte bracteolatis; calyce* Aniseiæ, *corolla fere Atropæ.*

Fig. 1. Alabastrum calyce ablato. *f.* 2. Flos. *f.* 3. Idem sepalo altero deflexo. *f.* 4. Corolla sectione laterali aperta. *f.* 5. Pistillum. *f.* 6. Ovarium transverse sectum.—*Omnia plus minus amplificata. Planchon.*

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TAB. DCCXCVII.

Amanoa bracteosa, *Planch.*

Monoica glaberrima, foliis anguste oblongis acuminatis basi acutiusculis integerrimis coriaceis nitidis, fasciculis florum bracteis 3 arcte cinctis in spicas abbreviatas quasi amentaceas distiche confertis, pedicello floris fœminei e bracteis longe exserto, florum masculorum inclusis, staminibus 5, capsula subglobosa nuce juglandis paulo minore, seminibus castaneis nitidis.

Hab. In Afric. trop. occid. Sierra Leone. *Don in herb. Soc. Hort. Lond.*

Rami ramulique crassi, conferte foliosi. *Folia* alterna, patentia v. deflexa, 3-4 poll. longa, 1-1½ poll. lata. *Petioli* 4-5 lin. longi. *Stipulæ* in unam brevem intra-axillarem obtusam concretæ. *Inflorescentiæ* terminales v. axillares, subsessiles. *Bractea* fasciculi singuli inferior late ovato-biloba, dorso sub apice mucronulata (revera stipularis), laterales 2 semiovatæ, nempe margine interno externo multo angustiore. *Flores* 3 in fasciculo externi bracteis exterioribus respondentes et ab eis tantum stipati, cæteri in fasciculos circiter 3 subdistiche congesti, omnes bractea membranacea fulva suffulti. *Flos* fœmineus pro fasciculo unicus, masculi 6-8. *Perianthium* (in flore masculo) 5-partitum, laciniis angustis, æstivatione leviter imbricatis. *Squamulæ* 5 laciniis perianth. oppositæ. *Stamina* 5 squamulis alterna, disco elevato inserta. *Rudimentum* pistilli minutum, trilobum. *Ovarium* (floris fœm.) 3-loculare, loculis 2-ovulatis. *Stigma* sessile pileiforme, obsolete trilobum. *Semina* in loculo quoque 2, hinc latere plano sibi invicem applicita, illinc convexa, medio ventre affixa, ecarunculata.

Ad genus *Amanoam*, quamvis Americanum certissime spectat.

Fig. 1. Fasciculus florum a latere visus. *f.* 2. Idem facie rachidi adpressa visus. *f.* 3. Una e bracteis lateralibus. *f.* 4. Fasciculus, bracteis externis ablatis. *f.* 5. Fasciculus florum partialis. *f.* 6. Flos masculus vi expansus. *f.* 7. Discus cum rudimento ovarii. *f.* 8. Pistillum verticaliter sectum (*hæc omnia plus minus amplificata*). *f.* 9. Una e valvis fructus, semine ablato. *f.* 10. Semen, *magnitud. natur.* *Planchon.*

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TAB. DCCXCVIII.

Dicranolepis disticha, *Planch.*

Gen. Char. Dicranolepis, *Planch.*—*Flores* hermaphrod. *Perianth.* hypocrateriforme, tubo gracili longo, limbo 5-partito, laciniis oblongis æstivatione imbricatis. *Squamæ* 10, petaliformes, fauci insertæ, laciniis perianthii oppositæ, bipartitæ, divisuris apice erosis. *Stamina* 10, fauci inserta, longiora 5 squamis opposita, breviora 5 alterna. *Filamenta* brevia, filiformia. *Antheræ* lineari-oblongæ, basifixæ, loculis connectivo dorsali intus adnatis, rima introrsa dehiscentibus. *Discus* cupuliformi-tubulosus ovarii stipitem includens, apice leviter 5-lobus. *Ovarium* brevi-stipitatum, hinc gibbosum, uniloculare, ovulo unico ex apice loculi pendulo. *Stylus* filiformis, haud exsertus, in *stigma* lineari-clavatum papillosum desinens. *Drupa ?* exsucca brevi-stipitata, mesocarpio e filamentis nitentibus contexto. Semen suspensum, globosum, anatropum, *integumento* membranaceo; *embryonis* recti *cotyledones* hemisphæricæ, carnosæ, facie plana sibi invicem applicitæ, *radicula* semi-exserta minutissima.

Frutex ? *Africæ occid. trop.*, ramulis *tenuibus virgatis* foliisque *distichis*, gemmis, ramulis novellis, petiolis, perianthiisque *extus pilis adpressis v. patentibus subsericeis v. hispidulis.* Folia *crebra, alterna, oblique subtrapezoideo-lanceolata, cuspidata, integerrima, brevissime petiolata, rigide membranacea, nervis lateralibus tenuibus, sat crebris, glabra, nitida, supra (in sicco) læte viridia, subtus viridi-flavescentia.* Stipulæ 0. Flores *axillares, solitarii, subsessiles, folio pollicari (v. sesquipollicari) non multo breviores.*

Dicranolepis *disticha*, Planch.

Hab. In Sierra Leone. *Don in herb. Soc. Hort. Lond.*

Genus ex characteribus datis distinctissimum. Fructus subglobosus, inferne acutiusculus, mole seminis *Coryli Avellanæ*, apice in mammillam brevem styli decidui cicatrice notatam pilosulam abrupte attenuatus, cæterum glaberrimus, epidermide castanea lævi, mesocarpio e fibris tenuissimis, more cocci bombycini, contexto.

Fig. 1. Flos. *f.* 2. Stamen. *f.* 3. Pistillum tubo perianthii vaginatum. *f.* 4. Idem, sicut discus tubulosus, verticaliter sectum. *f.* 5. Fructus, *magnit. natur.* *f.* 6. Semen. ***Planchon.***

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TAB. DCCXCIX. DCCC.

Napoleona Vogelii, *Hook. et Planch.*

Glaberrima, foliis lanceolato-ellipticis breviter et obtusiuscule cuspidatis basi acutis leviter repandis, glandulis 2 impressis supra basim folii margini laminæ admotis v. contiguis punctiformibus, floribus axillaribus subsessilibus, corolla flava intus medio rubra, coronæ externæ laciniis (70-75) linearibus liberis, internæ 40-fidæ laciniis æqualiter late linearibus integris, bacca depresso-globosa, seminibus intra loculos solitariis longe reniformibus vel geminis superpositis brevioribus.

Hab. In Africa trop. occid. Cape Palmas. *Vogel in herb. Hook.*

Species a *N. imperiali* et *N. Heudelotii* foliis minoribus, breviellipticis, nec oblongis, et colore florum distinctissima.

Folia 1½-3 poll. longa, 15-20 lin. lata, petiolis haud crassis 1-2 lin. longis. *Corolla* generis, obsolete 5-loba, lobulis flabellatis, crispis, circiter 30. *Coronæ* exterioris laciniæ corolla plus quam duplo breviores, flavescentes, internæ flavescenti-albidæ laciniæ sat profundæ, uninerves, obtusiusculæ. *Antheræ* 10, lineari-oblongæ, 1-loculares. *Discus* urceolaris, crassus, margine leviter lobatus. *Ovarii* structuram internam in flore unico imperfecto rite observare non licuit. *Bacca* corticosa magnitudine et facie fructus *Punicæ Granatum*, cortice extus rubescente punctulis albis crebre consperso; septis pulposis in speciminibus nostris exsiccatis et semi-collapsis et cum integumento seminum conglutinatis. *Semina* majora a basi ad apicem loculi extensa.

The want of space prevents any discussion upon the affinities of this truly singular genus. I will state only its relation to *Gustavia* among *Lecythideæ*, and to *Luffa* or *Telfairia* among *Cucurbitaceæ*, as a striking proof of the affinity already admitted between these two natural Orders.

Fig. 1. Flower; *nat. size.* *f.* 2. Internal part of the flower cut and *magnified.* *f.* 3. Stigma, *magnified.* *f.* 4. Fruit, *nat. size.* *f.* 5. The same, vertically cut. *f.* 6. The same, transversely cut. *f.* 7. Embryo. *Planchon.*

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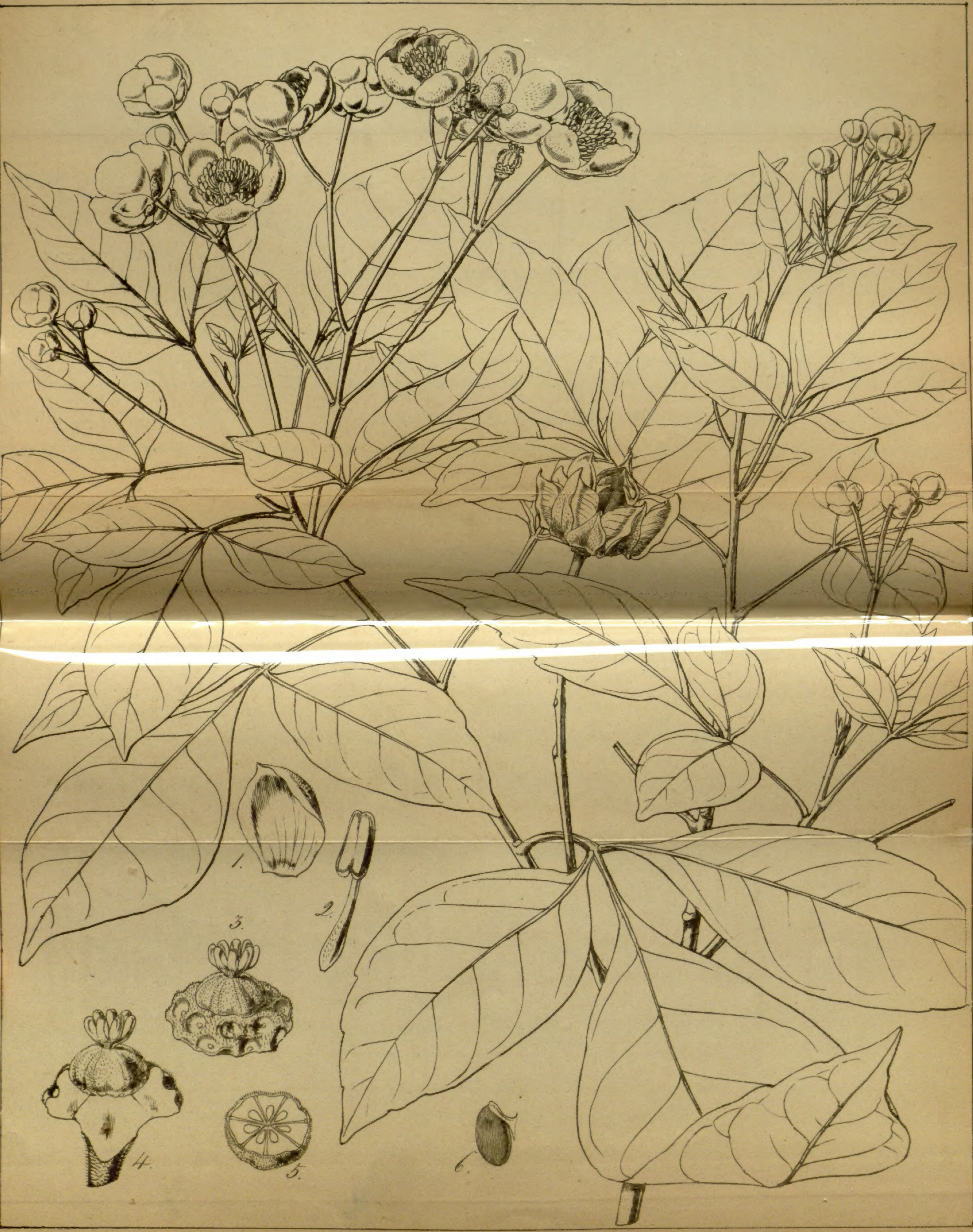
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